# UNIFORM CODE OF OPERATING RULES

CANADIAN NATIONAL RAILWAYS
(INCLUDING LINES IN UNITED STATES)
GRAND TRUNK WESTERN
RAILROAD COMPANY
CENTRAL VERMONT RAILWAY INC.
DULUTH, WINNIPEG AND PACIFIC
RAILWAY COMPANY

The rules herein set forth govern the railways operated by

CANADIAN NATIONAL RAILWAYS
*(including Lines in United States)*
GRAND TRUNK WESTERN RAILROAD COMPANY
CENTRAL VERMONT RAILWAY INC.
DULUTH, WINNIPEG AND PACIFIC
RAILWAY COMPANY

and supersede all previous rules and instructions inconsistent therewith.

Special instructions may be issued by proper authority.

VICE PRESIDENT—OPERATION.

This book is the property of the Company and is loaned to:—

| Name | Employed as |
|---|---|
| | |
| | |
| | |

Who hereby agrees to return it to the proper officer upon request or on leaving the service.

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## GENERAL NOTICE

Safety is of the first importance in the discharge of duty.

Obedience to the rules is essential to safety.

To enter or remain in the service is an assurance of willingness to obey the rules.

The service demands the faithful, intelligent and courteous discharge of duty.

To obtain promotion, ability must be shown for greater responsibility.

## GENERAL RULES

**A.** Employees whose duties are prescribed by these rules must have a copy of them accessible when on duty.

Employees whose duties are in any way affected by the time table must have a copy of the current time table, and supplements thereto if any, with them while on duty.

**B.** Employees must be conversant with and obey the rules and special instructions. If in doubt as to their meaning they must apply to proper authority for an explanation.

NOTE: Special instructions will be found in current time tables and in bulletins.

**C.** Employees must pass the required examinations.

**D.** Employees in any service connected with the movement of trains are subject to the rules and special instructions.

**E.** Employees must render every assistance in their power in carrying out the rules and special instructions and report promptly to the proper authority any violation thereof.

**F.** Accidents, failure in the supply of water or fuel, defects in track, bridges, signals, or any unusual condition which may affect the movement of trains, must be promptly reported by the quickest available means of communication to the proper authority and, when required, confirmed by mail. In case of injury to

persons the names and addresses of as many witnesses as possible must be obtained.

G. The use of intoxicants or narcotics by employees subject to duty, or their possession or use while on duty, is prohibited.

H. The use of tobacco by employees on duty in or about passenger stations or in cars carrying passengers is prohibited.

J. Employees on duty must wear the prescribed badge and uniform and be neat in appearance.

K. To avoid annoyance to the public, employees and others authorized to transact business at stations and on or about trains must be courteous, orderly and quiet.

L. Employees must always be vigilant to protect, and must promptly report anything detrimental to the Company's interest, and in case of danger to the Company's property must unite to protect it.

M. Employees must exercise care to avoid injury to themselves or others. They must observe the condition of equipment and the tools which they use in performing their duties and when found defective will, if practicable, put them in safe condition, reporting defects to the proper authority.

They must not ride on top or sides of cars or engines passing structures or obstructions at any point at which there is restricted over-

head or side clearance and must inform themselves respecting the location of such.

They must expect the movement of trains, engines or cars at any time, on any track, in either direction.

They must not stand on the track in front of an approaching engine or car for the purpose of boarding same.

They must be familiar with and be governed by the Company's safety rules or instructions.

## DEFINITIONS

**ENGINE**—A unit propelled by any form of energy, or a combination of such units operated from a single control, used in train or yard service.

**ENGINEMAN**—The employee in charge of and responsible for the operation of an engine.

**TRAIN**—An engine or more than one engine coupled, with or without cars, displaying markers.

**REGULAR TRAIN**—A train authorized by a time table schedule.

**SECTION**—One of two or more trains running on the same time table schedule displaying signals or for which signals are displayed.

**EXTRA TRAIN**—A train not authorized by a time table schedule. It may be designated as:

**EXTRA**—For any extra train except work extra.

Work train extra must be designated as **WORK EXTRA.**

Extra trains may be designated as:

**PASSENGER EXTRA** — For passenger train extra.

**MIXED EXTRA**—For mixed train extra.

**PLOW EXTRA**—For an extra train operating a snow plow.

**ETC.**

**SUPERIOR TRAIN**—A train having precedence over another train.

TRAIN OF SUPERIOR RIGHT—A train given precedence by train order.

TRAIN OF SUPERIOR CLASS—A train given precedence by time table.

TRAIN OF SUPERIOR DIRECTION—A train given precedence in the direction specified by time table as between opposing trains of the same class.

TIME TABLE—The authority for the movement of regular trains subject to the rules. It contains classified schedules with special instructions relating to the movement of trains and other important information.

SCHEDULE—That part of a time table which prescribes class, direction, number and movement for a regular train.

DISTRICT—That portion of a railway assigned to the supervision of a General Superintendent or other designated officer.

DIVISION—That portion of a railway assigned to the supervision of a Superintendent or other designated officer.

SUBDIVISION—A portion of a division designated by time table.

MAIN TRACK—A track extending through yards and between stations, upon which trains are operated by time table or train order, or both, or the use of which is governed by block signals or other method of control.

SINGLE TRACK—A main track upon which trains are operated in both directions.

DOUBLE TRACK—Two main tracks upon one of which the current of traffic is in a specified direction and upon the other in the opposite direction.

THREE OR MORE TRACKS—Three or more main tracks upon any of which the current of traffic may be in either specified direction.

CURRENT OF TRAFFIC—The movement of trains on a main track in one direction specified by the rules.

STATION—A place designated on the time table by name.

INITIAL STATION—The station at which a schedule is first timed on any subdivision is the initial station for that schedule.

SIDING—A track auxiliary to the main track for meeting or passing trains.

FIXED SIGNAL—A signal of fixed location indicating a condition affecting the movement of a train or engine.

YARD—A system of tracks provided for the making up of trains, storing of cars and for other purposes, over which movements not authorized by time table or train order may be made, subject to prescribed signals, rules and special instructions.

YARD LIMITS—That portion of the main track or tracks within limits defined by yard limit signs.

YARD ENGINE—An engine assigned to yard service.

PILOT—An employee assigned to a train when the engineman or conductor, or both, are not fully acquainted with the physical characteristics or rules of the railway, or portion of the railway, over which the train is to be moved.

REGISTER STATION—A station at which a train register is located.

TRAIN REGISTER—A book or form used at designated stations for registering signals displayed, the time of arrival and departure of trains and such other information as may be prescribed.

REDUCED SPEED—Proceed prepared to stop short of train or obstruction.

YARD SPEED—A speed that will permit stopping within one-half the range of vision.

# OPERATING RULES

NOTE: Unless otherwise specified, these rules are applicable without respect to the number of tracks.

Wherever the word "flagman" appears herein it applies to the employee required to perform such duties.

## STANDARD TIME

NOTE: Either the 12-hour or 24-hour system, as indicated by the time shown in current time tables, will be used for all purposes in connection with the movement of trains. All times shown herein are on the 12-hour system.

1. Standard time will be transmitted daily in the manner prescribed.

Standard clocks will be maintained at stations designated by time table.

Employees charged with the duty of receiving time signals must record on prescribed form and on indicator cards any variation from standard time.

2. Each conductor, engineman, trainman, fireman, yard foreman, yardman, and such other employees as the Company may direct, must carry, while on duty, a reliable railway grade watch approved by the proper authority and for which there must be a prescribed certificate on file with the designated railway officer.

3. Employees required to use railway grade watches must, unless otherwise arranged, submit them to a designated watch inspector for comparison and record at intervals of not less

than twenty and not more than thirty days, or at any other time should the variation reach thirty seconds. They must not regulate them, nor, unless they stop owing to failure to wind, set them themselves.

Watches of conductors, enginemen and yard foremen must be compared with a designated standard clock, where provided, before commencing each day's work. The time and variation must be registered on a prescribed form.

If a designated standard clock is not accessible, standard time must be obtained from the train dispatcher, or by comparing with a conductor, engineman or yard foreman who has had access to a standard clock and has registered.

Conductors, enginemen and yard foremen, also pilots and snow plow foremen, if any, are required to compare watches with each other before starting on each trip or before commencing work and with other members of their crew as soon as practicable thereafter.

Cards supplied by watch inspectors showing record of the rating of watches must be carried while on duty by employees required to use railway grade watches.

4. Each time table, from the moment it takes effect, supersedes the preceding time table, and its schedules take effect on any subdivision at the leaving time at their initial stations on such subdivision; but when a schedule of the preceding time table corresponds in number, class, day of leaving, direction, and initial and terminal stations with a schedule of the new time table, a train authorized by the preceding time table will retain its train orders and assume the schedule of the corresponding number of the new time table.

Schedules on each subdivision date from their initial stations on such subdivision.

Not more than one schedule of the same number and day shall be in effect on any subdivision.

4a. Notice of new time table or supplement will be bulletined at least seventy-two hours prior to the time it takes effect. Notice will also be given by train order issued to trains at least twenty-four hours prior to and, unless otherwise directed, for six days after it takes effect.

Agents, or yardmasters and locomotive foremen, where employed, must take receipt on prescribed form for new time tables and supplements. They must know that yard foremen and yard enginemen are provided with copies before commencing work.

5. Not more than two times are given for a train at any station; where one is given, it is, unless otherwise indicated, the leaving time; where two, they are the arriving and leaving times.

Unless otherwise specified, the time applies:

On single track—at the switch where an opposing train clears; where there is no such switch, at the station.

On double, three or more tracks—at the station.

At terminals—the time of first class trains, and also of second class trains designated as passenger trains in the time table, applies at the station; of other trains at the outer switch where trains regularly enter the yard.

Schedule meeting or passing stations are indicated by figures in full-faced type.

Both the arriving and leaving times of a train are in full-faced type when both are meeting or passing times or when one or more trains are to meet or pass it between those times.

When trains are to be met or passed at a siding extending between two adjoining stations, the time at each station will be shown in full-faced type.

Where there are one or more trains to meet or pass a train between two times, or

more than one train to meet a train at any station, attention is called to it by small figures showing the numbers of trains to be met or to pass.

6. The following symbols when used in the time table indicate:

| | |
|---|---|
| * | See footnote. |
| A | Arrive. |
| B | Bulletins and train register. |
| C | Fuel. |
| D | Day train order office. |
| F | Flag stop to receive or discharge traffic. |
| K | Standard clock, bulletins and train register. |
| L | Leave. |
| N | Night train order office. |
| P | Telephone. |
| R | Train register. |
| S | Regular stop. |
| V | Station protection signal. On both sides of station name indicates signals on both sides of station; when preceding station name, signal is east or south of that station; when following station name, signal is west or north of that station. |
| W | Water. |
| X | Crossover. |
| Y | Wye. |
| Z | Yard limit sign. |

## SIGNALS AND THEIR USE

7. Employees whose duties may require them to give signals must have the proper appliances, keep them in good order and ready for immediate use.

7a. Signals must be given from a point where they can be plainly seen and in such a manner that they cannot be misunderstood. If there is doubt as to the meaning of a signal, or for whom it is intended, it must be regarded as a stop signal. If signals disappear from view the movement must be stopped immediately, unless otherwise controlled.

7b. Crews of trains or engines clear of main track must not give a proceed signal to an approaching train or engine.

8. Flags (cloth, metal, or other suitable material) of the prescribed color must be used by day, and lights of the prescribed color and type by night.

9. Day signals must be displayed from sunrise to sunset, but when day signals cannot be plainly seen night signals must be used in addition.

Night signals must be displayed from sunset to sunrise, unless otherwise provided.

## 10. COLOR SIGNALS

| Color | Indication |
|---|---|
| (a) Red | Stop, except as otherwise provided for by the rules. |
| (b) Yellow | Proceed at reduced speed, and for other uses prescribed by the rules. |
| (c) Green | Proceed, and for other uses prescribed by the rules. |
| (d) Green and White (combined or flashing) | Flag stop. See rule 28. |
| (e) Blue | Workmen under or about an engine, car or train. See rule 26. |
| (f) Purple | When used on derails, stop. |
| (g) Lunar White | Identifies certain fixed signals. See fixed signal illustrations. |

11. On track protected by automatic block signal system a train or engine approaching a fusee burning red on or near its track must stop before passing, extinguish it, and may then proceed, but at reduced speed to the next block signal.

On track not protected by automatic block signal system a train or engine approaching a fusee burning red on or near its track must stop before passing, extinguish it, and may then proceed, but at reduced speed for 2000 yards.

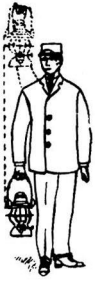
A train or engine approaching a fusee burning yellow on or near its track will proceed, but at reduced speed for 2000 yards; or to the next block signal on track protected by automatic block signal system.

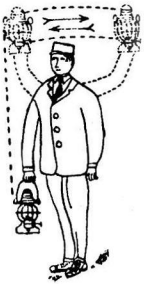
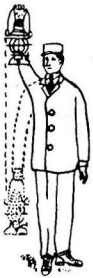
Fusees should not be placed on public crossings at grade nor where they may communicate fire.

11a. (DOUBLE, THREE OR MORE TRACKS) A train or engine approaching a fusee burning red on or beyond an adjoining track may pass it without stopping and proceed, but at reduced speed for 2000 yards; or to the next block signal on track protected by automatic block signal system.

## 12. HAND, FLAG AND LAMP SIGNALS

NOTE: The hand, or a flag, moved the same as the lamp, as illustrated in the following diagrams, gives the same indication.

| Manner of using | Indication | |
|---|---|---|
| (a) Swung at right angle to the track. | Stop | |
| (b) Held horizontally at arm's length. | Reduce speed | |
| (c) Raised and lowered vertically. | Proceed |  |

| Manner of using | Indication | |
|---|---|---|
| (d) Swung vertically in a circle at right angle to the track. | Back | |
| (f) Raised and swung horizontally above the head when standing. | Apply air brakes |  |
| (g) Raised and held at arm's length above the head when standing. | Release air brakes |  |

(h) Any object waved violently by any one on or near the track is a signal to stop.

## 14. ENGINE WHISTLE SIGNALS

NOTE: The signals prescribed are illustrated by "o" for short sounds, "—" for longer sounds. Each sound of the whistle should be distinct, with intensity and duration proportionate to the distance signal is to be conveyed.

In the event of engine whistle failing while train is en route, train will proceed to first repair point running with care approaching and passing public crossings at grade and stations. Repairs must be made at first repair point. Train dispatcher must be advised of failure from first open train order office and he will, when possible, notify other trains concerned.

| Sound | Indication |
|---|---|
| (a) o | Apply brakes. Stop. |
| (b) — — | Release brakes. Proceed. |
| (c) — o o o | Flagman protect rear of train. |
| (d) — — — — | (SINGLE or DOUBLE TRACK) Flagman may return from west or south.* |
| | (THREE or MORE TRACKS) Flagman for track No. 2 may return.* |

*As prescribed by rule 99.

| Sound | Indication |
|---|---|
| (da) — — — — o | (THREE or MORE TRACKS) Flagman for track No. 4 may return.* |
| (e) — — — — — | (SINGLE or DOUBLE TRACK) Flagman may return from east or north.* |
| | (THREE or MORE TRACKS) Flagman for track No. 1 may return.* |
| (ea) — — — — — o | (THREE or MORE TRACKS) Flagman for track No. 3 may return.* |

*As prescribed by rule 99.

NOTE: At junctions or other points at which signals 14 (d), (da), (e), or (ea) may apply to flagmen of more than one train, care must be exercised to ensure return only of the flagman for which signal intended.

| | |
|---|---|
| (g) o o | Answer to any signal not otherwise provided for. |

| Sound | Indication |
| --- | --- |
| (h) o o o | When train is standing —back. Answer to back up signal.<br>When train is running—answer to communicating signal to stop at next station. |
| (j) o o o o | Call for signals. |
| (k) — o o | To call attention to signals displayed for a following section as prescribed by rule 31. |
| (k-a) o o — | Answer to 14k. See rule 31. |
| (l) — — o — | Approaching public crossings at grade, and as prescribed by rule 31. |
| (m) ——— | Approaching stations, and as prescribed by rule 31. |
| (n) — — o | Answer to communicating signal to stop at next station to meet or wait for a train, and as prescribed by rule 90. |

| Sound | Indication |
| --- | --- |
| (o) o — | When double heading—air brakes have failed on leading engine and engineman on second engine must at once take control and stop train. The same signal to be given by the engineman on second engine as soon as he has control of the air brakes. |
| (p) Succession of short sounds. | Alarm for persons or animals on the track. |
| (q) — o | When running against the current of traffic:<br>(1) At frequent intervals and approaching stations, curves or other points where view may be obscured.<br>(2) Approaching passenger or freight trains and when passing freight trains.<br>(3) Preceding the signals prescribed by (d) and (e). |
| (r) o o o o o o | To notify track forces of fire on or near the right of way. |

15. The explosion of one or more torpedoes, in the absence of a more restrictive signal, indicates proceed, but at reduced speed for 2000 yards from the point where the torpedoes were exploded.

Where the use of torpedoes is required duplicates should be placed on the opposite rail to explode simultaneously.

Torpedoes exploded by other than a train or engine must be replaced immediately.

Torpedoes must not be placed near stations nor on public crossings at grade.

## 16. COMMUNICATING SIGNALS

NOTE: The signals prescribed are illustrated by "o" for short sounds, "—" for longer sounds.

| Sound | Indication |
|---|---|
| (a) o o | When standing—start. |
| (b) o o | When running—stop at once. |
| (c) o o o | When standing—back. |
| (d) o o o | When running—stop at next station; where a train is required to flag stop between stations, it indicates stop at next flag stop for that train. |
| (e) o o o o | When standing—apply or release air brakes. |
| (f) o o o o | When running—reduce speed. |
| (g) o o o o o | When standing—recall flagman. |
| (h) o o o o o | When running—increase speed. |

| Sound | Indication |
| --- | --- |
| (j) o o o o o o | When running—increase train heat. |
| (k) o o o o o o o o | When running—release sticking brake; look back for hand signal. |
| (l) ——— | Shut off train heat. |
| (m) o o — | When running—as prescribed by rule 90. |

## TRAIN SIGNALS

17. The headlight will be displayed to the front of every train by night. It must be extinguished when a train turns out to meet another and has stopped clear of the main track, or is standing to meet trains at the end of double, three or more tracks, or at junctions with switches properly lined for the approaching train. It should be left extinguished until the rear of the expected train has passed.

17a. On engines so equipped, the headlight will be dimmed:

When standing on yard tracks;

When standing on the main track at meeting points after the switch has been lined for the siding;

Approaching stations where trains are receiving or discharging passengers;

Approaching stations where train orders or clearances are to be picked up;

Approaching meeting and passing points, junctions, end of double, three or more tracks where trains or engines are clear, to assist in train identification by train and engine crews;

On double, three or more tracks when approaching trains in the opposite direction;

Except that the full power of the headlight must be used approaching all public crossings at grade and until such crossings are reached regardless of their location.

17b. Engines used in road service which are regularly required to run backward for any portion of the trip, except to pick up a detached portion of a train or in making terminal movements, shall have a headlight on the rear.

Under other conditions requiring an engine to run backward at night a white light must be displayed on the leading end.

17c. Should the headlight fail while train is en route, repairs must be made as quickly as possible. If repairs cannot be made, such lights as are available will be displayed and train may then proceed to the first repair point, passing over all public crossings at grade not specially protected by watchman, gates or automatic crossing signal with care and at a speed not exceeding twenty miles per hour. At the first repair point, repairs must be made or the engine replaced.

Train dispatcher must be advised from first open train order office when a train is running with defective headlight and he will, when possible, notify other trains concerned.

18. Yard engines will display a headlight to the front and rear by night. When not provided with a headlight at the rear a white light must be displayed.

Under conditions not requiring display of markers, other engines without cars will display a white light to the front and rear by night.

NOTE: Headlight on end coupled to cars may be extinguished.

19. The following signals will be displayed to the rear of every train, as markers, to indicate the rear of the train.

NOTE: Diagrams are intended to illustrate general location of the train signals, not the exact manner in which they are to be attached.

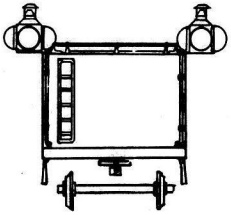


*Fig. 1.*

Engine running forward by day without cars, or at the rear of a train pushing cars.
Marker lamps not lighted.

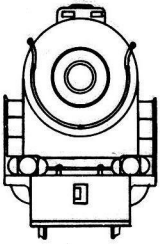


*Fig. 2.*

Engine running backward by day without cars, or at the rear of a train pushing cars.
Marker lamps not lighted.

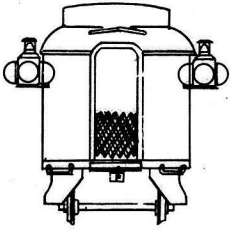


*Fig. 3.*

Rear of train by day.
Marker lamps not lighted.

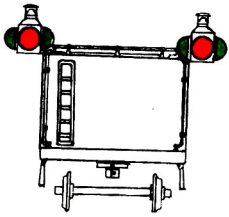


*Fig. 4.*

Engine running forward by night without cars, or at the rear of a train pushing cars on single track; with the current of traffic on double track and with the current of traffic on passenger tracks when there are three or more tracks.

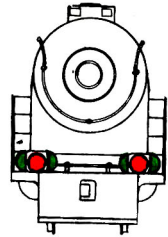


*Fig. 5.*

Engine running backward by night without cars, or at the rear of a train pushing cars on single track; with the current of traffic on double track, and with the current of traffic on passenger tracks when there are three or more tracks. Headlight extinguished.

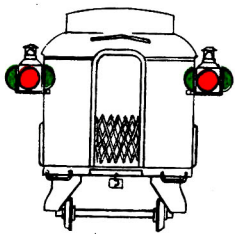


*Fig. 6.*

Rear of train by night on single track; with the current of traffic on double track and with the current of traffic on passenger tracks when there are three or more tracks.

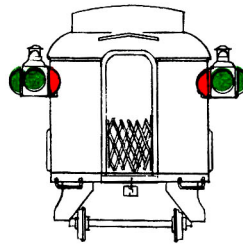


*Fig. 7.*

Rear of train by night when train is clear of main track to be passed by another train.

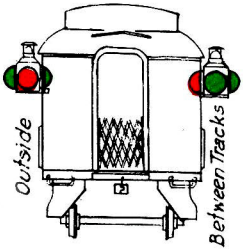



*Fig. 8.*

Rear of train by night running against the current of traffic when there are double, three or more tracks.

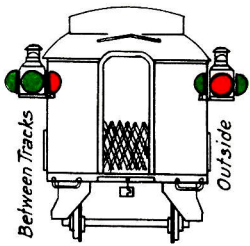



*Fig. 9.*

Rear of train by night using freight tracks with the current of traffic when there are three or more tracks.

19a. Trains with rear car (or engines) under conditions where the display of markers is required, if not equipped to display markers as prescribed by rule 19, will display a red flag by day and a red light by night on rear of train, to be removed and replaced by a white light by night when train is clear of main track to be passed by another train.

19b. When rear unit of a train is equipped with built-in electric markers they must be lighted by day as well as by night.

20. All sections except the last will display two green flags and, in addition, two green lights by night, in the places provided for that purpose on the front of the engine.

NOTE: Where flags are prescribed, suitable lights may be substituted when authorized.

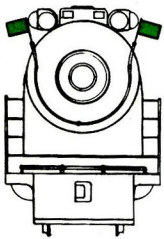


*Fig. 10.*

Engine running forward by day displaying signals for a following section.

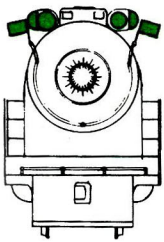


*Fig. 11.*

Engine running forward by night displaying signals for a following section.

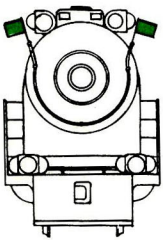


*Fig. 12.*

Engine running backward by day without cars or at the rear of a train pushing cars and displaying signals for a following section.

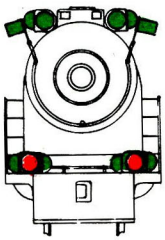


*Fig. 13.*

Engine running backward by night without cars or at the rear of a train pushing cars and displaying signals for a following section. Headlight extinguished.

21. Extra trains will display two white flags and, in addition, two white lights by night, in the places provided for that purpose on the front of the engine.

NOTE: Where flags are prescribed, suitable lights may be substituted when authorized.

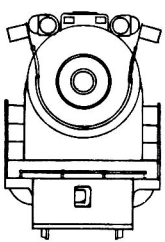


*Fig. 14.*

Engine running forward by day as an extra train.

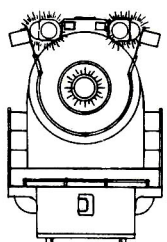


*Fig. 15.*

Engine running forward by night as an extra train.

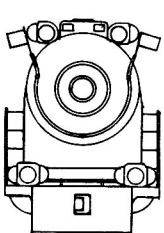


*Fig. 16.*

Engine running backward by day as an extra train without cars or at the rear of a train pushing cars.

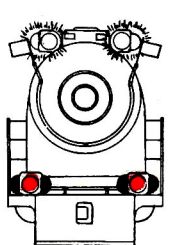


*Fig. 17.*

Engine running backward by night as an extra train without cars or at the rear of a train pushing cars. Headlight extinguished.

22. When two or more engines are coupled, over all or a portion of a subdivision, each engine will display signals as prescribed by rules 20 and 21.

23. One flag or light displayed where in rules 19, 20 and 21 two are prescribed will indicate the same as two; but the proper display of all train signals is required.

24. When two or more engines are coupled the leading engine will sound the signals as prescribed by rule 14.

25. Each car of a passenger train must be connected with the engine by a communicating signal appliance.

In the event of failure rendering the communicating signal on the engine of a passenger train inoperative occurring while train is en route, the train will be taken to the first repair point with such facilities as are available where repairs must be made. Under such conditions, the conductor will arrange for hand signal to be given engineman approaching stations.

26. A blue signal displayed at one or both ends of an engine, car or train, indicates that workmen are under or about it; when thus protected it must not be coupled to or moved. Each class of workmen will display the blue signals and the same workmen are alone authorized to remove them. Other equipment must not be placed on the same track so as to intercept the view of the blue signals without first notifying the workmen.

When emergency repair work is to be done under or about engines or cars in a train and a blue signal is not available, the engine crew must be notified and protection given those engaged in making the repairs.

27. A signal imperfectly displayed or the absence of a signal at a place where one is usually shown must be regarded as the most restrictive indication that can be given by that signal, except that when the day indication is unmistakable it will govern. Such conditions must be reported to the proper officer.

Employees using a switch where the switch light is imperfectly displayed or absent must, if practicable, correct or replace the light.

28. A combined or flashing green and white signal will be used to stop a train at the flag stations indicated on its schedule or in special instructions.

29. When a signal (except a fixed signal) is given to stop a train or engine it must, unless otherwise provided, be acknowledged as prescribed by rule 14 (g), (h), or (n).

30. The engine bell must be rung when an engine is about to move; while moving about stations; while passing a train standing on adjacent track, and 80 rods (¼ mile) from every public crossing at grade until the crossing is passed.

31. Unless otherwise provided, signal 14 (k) must be sounded by a train displaying signals for a following section to call attention of engine and train crews of extra trains, trains of the same class, inferior trains, and of trains affected at train order meeting, waiting or passing points on single track; of trains of the same class and inferior trains moving in the same direction on double track, to signals displayed, and must hear the answer 14 (k-a) or stop and notify trains of signals displayed.

Unless otherwise provided, signal 14(k) must be sounded by a train displaying signals for a following section to call attention of engine and train crews of trains moving in the opposite direction on double, three or more tracks, and moving in the same direction on three or more tracks, to signals displayed.

Signal 14 (k) must be sounded by a train displaying signals for a following section to call attention of maintenance forces and crews of yard engines to signals displayed.

Signal 14 (l) must be sounded at least 80 rods (¼ mile) from every public crossing at grade (except within the limits of such towns or cities as may be prescribed in special instructions) and at whistle posts; to be prolonged or repeated according to the speed of the train.

Signal 14 (l) must be sounded at frequent intervals where the view is limited.

Signal 14 (m) must be sounded one mile from stations, watering and fueling points, junctions, the end of double, three or more tracks, drawbridges, and railway crossings at grade.

Signal 14 (m) must also be sounded immediately a train stops when trainman is required, under rules 41 (c) or 44 (d), to replace torpedoes exploded.

32. The unnecessary use of the whistle or the bell is prohibited. They will be used only as prescribed by rule or law, or to prevent accident.

33. Watchmen stationed at public crossings at grade must use stop signals when necessary to stop trains or engines. They will use prescribed signals to stop highway traffic.

34. Crews on engines and snow plow foremen must know the indication of fixed signals (including switches where practicable) and members of train crews must know the indication of train order signals affecting their train before passing them. All members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.

35. In emergency cases when track is suddenly found defective or is obstructed any employee must by the use of flags, lights, torpedoes, fusees or other signals make every possible effort to stop trains in both directions.

## PROTECTION OF IMPASSABLE OR SLOW TRACK

40. (a) Before undertaking any work which may render the main track unsafe for movements at normal speed, or if rendered unsafe from any cause, trackmen, bridgemen, or other employees must provide protection by sending out a flagman with flagman's signals in each direction at least 2000 yards from the defective or working point.

(b) After going out the required distance, flagman must take up a position where there will be a clear view of him from an approaching train of, if possible, 500 yards, first placing torpedoes not more than 100 nor less than 50 yards apart to cause two explosions at least 200 yards beyond such position.

(c) Flagman must not return until recalled or relieved.

(d) If necessary to go beyond the required distance, flagman will leave the torpedoes at the required distance, but under such conditions must also place torpedoes at the point at which an approaching train is flagged.

(e) On the approach of a train flagman must display stop signals, using lighted fusees at night or in obscure weather.

(f) Trains stopped by a flagman will be governed by his instructions, and on reaching the defective or working point will there be governed by instructions of the foreman in charge.

(g) Flagmen must each be equipped for day time with

A red flag on a staff,
At least eight torpedoes and
Five red fusees; and

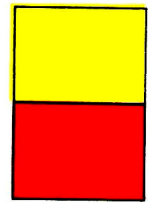
For night time and when weather or other conditions obscure day signals,

A red light,
A white light,
A supply of matches,
At least eight torpedoes and
Five red fusees.

41. On subdivisions or portions thereof specified in the time table or special instructions, rule 40 may be modified as follows:

(a) By day place a red flag and, in addition, by night a red light between the rails 200 yards in each direction from the defective or working point, and place torpedoes on each rail to cause one explosion 200 yards beyond the red signals, also:

(b) By day place a yellow over red flag and, in addition, by night a yellow light and a red light at least 2000 yards in each direction from the defective or working point on the same side of the track as the engineman of an approaching train, and place torpedoes not more than 100 nor less than 50 yards apart to cause two explosions 200 yards beyond these signals.



(c) Trains approaching the signals prescribed by clause (b) must stop, replace the torpedoes and proceed to the red signal prescribed by clause (a) and there be governed by instructions of the foreman in charge, and must not proceed until the red signal has been removed by the foreman.

(d) When weather or other conditions obscure day signals night signals must be used in addition.

42. When the main track is impassable, and after train order protection has been provided and the foreman so advised, rules 40 and 41 may be modified as follows:

(a) By day place a red flag and, in addition, by night a red light between the rails 200 yards in each direction from the defective or working point, also:

(b) By day place a yellow flag and, in addition, by night a yellow light at least 2000 yards in each direction from the defective or working point on the same side of the track as the engineman of an approaching train, where there is a clear view of the signal of, if possible, 500 yards.

(c) Trains stopped by the red signal prescribed by clause (a) must be governed by instructions of the foreman in charge, and must not proceed until the red signal has been removed by the foreman.

(d) When weather or other conditions obscure day signals night signals must be used in addition.

43. When the nature of the defect does not require stop to be made, and after speed restriction has been placed by train order and the foreman so advised, rules 40 and 41 may be modified as follows:

(a) By day place a yellow flag and, in addition, by night a yellow light at least 2000 yards in each direction from the defective point on the same side of the track as the engineman of an approaching train, also:

(b) By day place a green flag and, in addition, by night a green light in each direction immediately beyond the defective point.

(c) Trains must reduce speed to comply with requirements of the train order, and must not increase speed until the entire train has passed the green signal.

(d) When weather or other conditions obscure day signals night signals must be used in addition.

44. On subdivisions or portions thereof specified in the time table or special instructions, when the main track is found to be unsafe for movements at normal speed but safe for speed of ten miles per hour or more, rule 41 may be modified as follows:

(a) By day place a yellow flag and, in addition, by night a yellow light 200 yards in each direction from the defective point on the same side of the track as the engineman of an approaching train, also:

(b) By day place a yellow over red flag and, in addition, by night a yellow light and a red light at least 2000 yards in each direction from the defective point on the same side of the track as the engineman of an approaching train, and place torpedoes not more than 100 nor less than 50 yards apart to cause two explosions 200 yards beyond these signals, also:

(c) By day place a green flag and, in addition, by night a green light in each direction immediately beyond the defective point.

(d) Trains must stop and replace torpedoes on each side of the defective point, and must reduce speed to ten miles per hour before passing the yellow signal and must not increase speed until the entire train has passed the green signal.

(e) When weather or other conditions obscure day signals night signals must be used in addition.

(f) The foreman must report the condition to the train dispatcher as soon as practicable, and when advised that speed restriction has been placed by train order must mark the defective point as prescribed by rule 43.

45. In providing protection each main track must be regarded as a track upon which trains may run in either direction. Where two main tracks are on the same roadbed, flags and lights required to be placed on the same side of the track as the engineman of an approaching train under rules 41-44 inclusive must be

placed to the outside of the track affected and not between the two main tracks. Under this rule, when the two main tracks on the same roadbed are for single track operation their location will be shown in the time table.

46. When flags or lights are placed as set forth in rules 41-45 inclusive they will be mounted on staffs and elevated so as to be clearly in view of the engineman of an approaching train.

47. Where the use of torpedoes is required, duplicates should be placed on the opposite rail to explode simultaneously.

48. Torpedoes must not be placed near stations nor on public crossings at grade.

49. A sign bearing figures indicating permissible speeds, or the word **SLOW**, placed at the side of the track will indicate a permanent slow order; its location and speeds permitted will be specified in the time table or special instructions.

## SUPERIORITY OF TRAINS

71. A train is superior to another train by right, class or direction.

Right is conferred by train order; class and direction by time table.

Right is superior to class or direction.

71a. (SINGLE TRACK) Direction is superior as between trains of the same class.

72. Trains of the first class are superior to those of the second; trains of the second class are superior to those of the third; and so on.

72a. (SINGLE TRACK) Trains in the direction specified by time table are superior to trains of the same class in the opposite direction.

73. Extra trains are inferior to regular trains.

## MOVEMENT OF TRAINS AND ENGINES

82. Time table schedules, unless fulfilled, are in effect for twelve hours after their time at each station.

Regular trains twelve hours behind either their schedule arriving or leaving time at any station lose both right and schedule, and can thereafter proceed only as authorized by train order.

83. Conductors must register their trains at the register stations designated for them in the time table, but where authorized by time table or train order a train may pass a register station without registering when informed by train order of the arrival and departure of superior trains. When a train is authorized to pass a register station, and an operator is on duty, the conductor must deliver a register ticket to the operator who will register the train and preserve the ticket. Should the operator fail to obtain the ticket he must not enter any information on the train register except such as may be authorized by train order.

Unless otherwise provided, a train must not leave its initial station on any subdivision, or other stations as may be designated in the time table, pass from double, three or more tracks to single track, or from three or more tracks to double track, until it has been ascertained whether all trains due which are superior or of the same class have arrived or left, and obtained terminal clearance.

Unless otherwise provided, a train or engine must not enter into nor move in territory where trains are operated under train order authority until it has been ascertained whether all trains due which are superior have arrived or left.

Regular trains scheduled through over two or more subdivisions and having the same number on each may assume the schedule of the train of the same number at intermediate initial stations and leave without terminal clearance if no operator on duty, or when authorized by time table, and train order signal indicates proceed.

At bulletin stations designated in the time table, conductors and enginemen must read and sign the bulletins or instructions posted before commencing work. Other members of the crew are also required to familiarize themselves therewith.

Bulletins affecting the movement of trains will be re-issued the first of each month.

Crews working in yards must familiarize themselves with bulletins or instructions which affect their movements.

84. A train must not start until the proper signal is given.

85. Trains of one schedule may pass trains of another schedule of the same class, and extra trains may pass and run ahead of fourth class and extra trains.

A section must not pass and run ahead of another section of the same schedule without first exchanging train orders, signals and numbers with the section to be passed. The change in sections must be reported to the train dispatcher from the next available point of communication.

In all instances in the exchange of train orders, conductors and enginemen must know that the train orders, clearances and instructions exchanged are correctly understood by the other. Before either train proceeds the engineman must read his train orders aloud to the conductor.

85a. (SINGLE TRACK) When a section passes another section of the same schedule, unless authorized by train order, the leading train must notify opposing trains affected until the next available point of communication is reached and the train dispatcher advised.

86. Unless otherwise provided, an inferior train must be clear at the time a superior train in the same direction is due to leave the next station in the rear where time is shown.

87. (SINGLE TRACK) An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by rule 99.

Extra trains must clear the time of opposing regular trains not less than five minutes unless otherwise provided, and will be governed by train orders with respect to opposing extra trains.

88. (SINGLE TRACK) At meeting points between extra trains the train in the inferior time table direction must take the siding unless otherwise provided.

Trains must pull into the siding when practicable; if necessary to back in, the train must first be protected as prescribed by rule 99, unless otherwise provided.

89. (SINGLE TRACK) At meeting points the inferior train must take the siding and clear the time of the superior train not less than five minutes, except at schedule meeting points between trains of the same class where the inferior train must clear the main track before the leaving time of the superior train.

The superior train must stop at schedule meeting points with trains of the same class unless switch is properly lined and track clear.

The inferior train must pull into the siding when practicable. If necessary to back in, unless otherwise provided, it must first be protected as prescribed by rule 99.

89a. (SINGLE TRACK) When necessary to stop to meet a train, the train holding the main track must stop clear of the track to be used by the other train.

89b. (SINGLE TRACK) A train must not leave any point without knowing positively that the train or trains which it was required to meet or clear at that point have arrived.

90. The conductor of every passenger train must give communicating signal 16 (m) between one and three miles from every station at which it is to meet or wait for a train, clear a superior train, or to move through a siding or crossover when so instructed. The engineman must make running test of the brake as soon as practicable and then give whistle signal 14 (n) in acknowledgment. Should the engineman fail to respond to signal 16 (m) as herein prescribed, action must be taken to stop the train before the station is reached.

Unless otherwise provided, on freight, mixed and work trains in motion between stations, conductors and enginemen will see that trainmen are at the front and rear of trains (in cupola of caboose where provided) in position to observe the safe operation of trains and, when practicable, exchange signals when approaching and passing stations. Approaching junctions, railway crossings at grade, drawbridges, points where trains may be required to stop, where trains are to be met or passed, and at a safe distance before descending heavy grades or at any point where failure of the brakes may be attended with hazard a trainman must be within convenient access of the conductor's valve.

Trainmen will not be required to ride on top of cars unless necessary for the safety of the train.

91. Unless some form of block signal system is in operation to the next open train order office, except in closing up at stations, and unless clearance indicates the arrival of the preceding train at a station ahead, the following intervals must be maintained between trains in the same direction:

Between a train carrying passengers or operating a snow plow, and a following train—at least twenty minutes;

Between a preceding train, and a train operating a snow plow—when a report has been received of the arrival of the preceding train at a station ahead, except that if there is no means of communication it may follow in thirty minutes and operate at reduced speed to the next available point of communication;

Between a preceding train, and a light engine or an engine and caboose—at least thirty minutes;

Between other trains—at least fifteen minutes.

A train operating a snow plow, a light engine, or an engine and caboose must obtain clearance at all open train order offices.

Failure of communication must be noted on clearance.

91a. Unless some form of block signal system is in operation to the next open train order office, the train order signal will be used to maintain the intervals prescribed by rule 91

and must be displayed at stop promptly after the rear of the train has passed the signal.

92. A train must not leave a station in advance of its schedule leaving time.

93. Within yard limits the main track may be used clearing the time of first and second class trains at the next station where time is shown. Protection against third class, fourth class, extra trains and engines is not required.

Third class, fourth class, extra trains and engines must move within yard limits at yard speed unless the main track is known to be clear.

NOTE: Where automatic block signal system rules are in effect, "known to be clear" includes when track is known to be clear by signal indication.

Yellow lights must be displayed on yard limit signs from sunset to sunrise.

Except in automatic block signal system territory, approach signs will be placed one mile from yard limit signs.

By night, or in foggy or stormy weather, a red light must be placed on unattended cars or dead engines obstructing the main track within yard limits.

(DOUBLE, THREE OR MORE TRACKS) A train or engine must not be moved against the current of traffic within yard limits until provision has been made for the protection of

such movement, and must then move at yard speed.

## 93a. (SINGLE TRACK)

NOTE: This rule must be adopted for the entire system of a railway (single track) or not be used at all.

On subdivisions designated in the time table the outer main track switches of sidings will be considered station limits, and the main track may be used inside such limits clearing the time of first and second class trains at the next station where time is shown. Protection against third class, fourth class, extra trains and engines is not required.

Third class, fourth class, extra trains and engines must move within station limits at yard speed unless the main track is known to be clear.

NOTE: Where automatic block signal system rules are in effect, "known to be clear" includes when track is known to be clear by signal indication.

94. A train which overtakes another train so disabled that it cannot proceed may pass it, if practicable, and if necessary will assume the schedule and take the train orders of the disabled train, proceed to the next available point of communication, and there report to the train dispatcher. The disabled train will assume the right or schedule and take the train orders of the last train with which it has exchanged, and will, when able, proceed to and report from the next available point of communication. Trains affected which are met

or passed under these circumstances must be notified.

94a. (SINGLE TRACK) When a train, unable to proceed against the right or schedule of an opposing train, is overtaken between open train order offices by a train having right or schedule which permits it to proceed, the delayed train may, after proper understanding with the following train, precede it to the next available point of communication where it must report to the train dispatcher. When opposing trains are met under these circumstances it must be fully explained to them by the leading train that the expected train is following.

95. Two or more sections may be run on the same schedule. Each section has equal time table authority.

Unless otherwise provided, a train must not display signals for a following section without train order authority.

96. Signals must not be ordered displayed to nor taken down at other than a register station for the train displaying the signals. When signals are ordered displayed to or taken down at a register station between terminals on single track opposing trains affected must be given a copy of the train order.

A regular train must not be created at a station other than its initial station on any subdivision, nor may a train which has been detoured again take up its own schedule on

the same subdivision, without train order authority. In such instances the schedule must be annulled between the stations where it has not been fulfilled.

97. Extra trains must not be run without train orders unless otherwise provided, and then only on authority of train dispatcher.

98. Trains or engines must approach the end of double, three or more tracks, junctions, interlocked railway crossings at grade and interlocked drawbridges prepared to stop unless the switches are properly lined, signals indicate proceed and track is clear.

Trains or engines must stop at the stop signs at non-interlocked railway crossings at grade and at non-interlocked drawbridges and not proceed until the proper signal has been given for that purpose.

When clear signals are given at interlocked railway crossings at grade, unless otherwise provided, the speed of any train must not exceed thirty-five miles per hour until the entire train has passed the crossing.

When clear signals are given at interlocked drawbridges the speed of a passenger train must not exceed twenty-five miles per hour, and of any other train or engine fifteen miles per hour, until the entire train has passed the drawbridge.

99. When a train is moving under circumstances in which it may be overtaken by an-

other train, lighted fusees must be dropped off at proper intervals and such other action taken as may be necessary to ensure full protection.

When a train stops under circumstances in which it may be overtaken by another train, a flagman must go back immediately with flagman's signals a sufficient distance to ensure full protection, at least:

In day time, if there is no down grade toward train within one mile of its rear and there is a clear view of its rear of 2000 yards from an approaching train - - - - - - - - - - - 1000 yards;

At other times and places, if there is no down grade toward train within one mile of its rear - - - - - 1500 yards;

If there is a down grade toward train within one mile of its rear - 2000 yards;

Except that when trains are operating under automatic block signal system rules, with signals in operation, and with at least two automatic block signals in the direction of movement immediately to the rear, flagman must go back a sufficient distance to provide full protection against trains moving at restricted speed.

When a train stops under circumstances in which it may be overtaken by another train the engineman will immediately signal the flagman to protect the rear. When ready to proceed he will recall the flagman.

The flagman must, after going back a sufficient distance from the train to ensure full protection, take up a position where there will be an unobstructed view of him from an approaching train of, if possible, 500 yards, first placing torpedoes not more than 100 nor less than 50 yards apart to cause two explosions at least 200 yards beyond such position and, when necessary, in addition, displaying lighted fusees, and must not return until recalled or relieved and safety of the train will permit. If necessary to go beyond the required distance he will leave the torpedoes at the required distance as an indication of the location of his train, but must, under such conditions, also place torpedoes at the point at which an approaching train is flagged.

If recalled before another train arrives he must, in addition to the torpedoes, leave a fusee burning red at the point from which he returns and while returning to his train a fusee burning red must be placed at such points or times as may be necessary to ensure full protection. When curvature, weather or other conditions require, or when snow plows or flangers may be running, extra precaution must be taken.

To maintain the proper interval between trains a fusee burning red must be left by the protected train at the point from which it moves.

Flagman must always on the approach of a train display stop signals.

The front of a train must be protected in the same manner when necessary.

Flagmen must each be equipped for day time with

A red flag on a staff,
At least eight torpedoes and
Five red fusees; and

For night time and when weather or other conditions obscure day signals,

A red light,
A white light,
A supply of matches,
At least eight torpedoes and
Five red fusees.

A train should not stop between stations at a place where the view from following trains is obstructed if it can be avoided.

Conductors and enginemen are responsible for the protection of their trains.

101. Trains and engines must be fully protected against any known condition, not covered by the rules, which interferes with their safe passage.

When for any reason a portion of a train is left on the main track every precaution must be taken to protect the remaining portion against the returning movement. Conductors, enginemen, and pilots, if any, are responsible

for the safety of the movement. In the absence of conductor at head-end of train when movement is commenced the engineman will arrange for the necessary protection. Torpedoes must be placed a sufficient distance in advance and in addition by night or when weather or other conditions require, on single track a red light, and on double, three or more tracks a white light must be prominently displayed on the front of the leading car.

The remaining portion must not be moved nor passed until the engine returns, unless the movement is adequately protected.

102. When a train is disabled, or stopped suddenly by an emergency application of the air brakes or other causes, adjacent tracks as well as tracks of other railways liable to be obstructed must at once be protected in both directions until it is known such tracks are safe and clear for the movement of trains.

103. When cars are pushed by an engine (except when switching and making up trains in yards where there are no public crossings at grade, or where there are public crossings at grade adequately protected by gates or otherwise) a member of the crew must be on the leading car and in a position from which signals necessary to the movement can be properly given.

Whenever in any city, town or village, cars not headed by an engine or its tender are passing over or along a public road at grade

which is not adequately protected by gates or otherwise, a member of the crew must be on the leading car to warn persons standing on, or crossing, or about to cross the track.

No part of a car or engine may be allowed to occupy any part of a public crossing at grade for a longer period than five minutes, and a public crossing at grade must not be obstructed by switching operations for more than five minutes at a time.

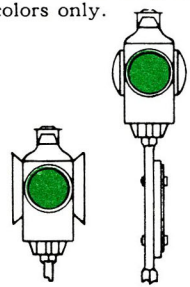
Where special instructions require that switching movements over certain public crossings at grade be protected by a member of the crew, they include movements of engines either before, during, or after the switching movements take place.

When a train or engine passes over any public crossing at grade protected by automatic signals or automatic gates, it will be necessary before making a reverse movement over the crossing for a member of the crew to protect the same.

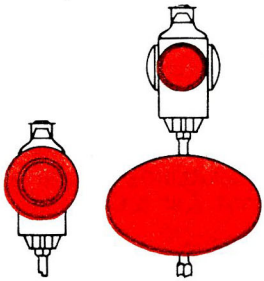
When necessary to cut trains at public crossings at grade, except where a member of the crew is to flag the crossing, or where other protection is provided, cars or engines must not be left standing within one hundred feet clear on both sides of the travelled portion of the public road.

## MAIN TRACK SWITCHES

NOTE: These diagrams are intended to illustrate the colors only.



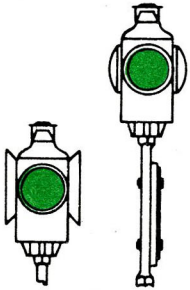
Set for Main track.
NORMAL POSITION.



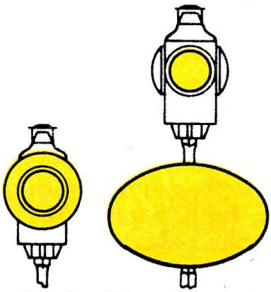
Set for Diverging route.

Spring Switch.

**YARD SWITCHES**—With or without lamps.



Set for Straight track or Lead.
NORMAL POSITION.



Set for Diverging route.

104. Except where switchtenders are stationed, conductors are responsible for the position of switches manually operated by them and members of their crews. Employees are not relieved of responsibility in properly handling switches.

Switches must at all times be secured and those on main track, when not in use, must be kept locked.

After a switch has been turned the points must be examined and the target or light observed to know that the switch is properly lined.

Switches must be left in normal position after having been used.

A main track switch must not be left open unless in charge of a member of the crew or a switchtender.

When a train or engine is standing on any track waiting for a train the engine crew and trainman must, when practicable, see that the switches at the front of the engine are properly lined.

A train or engine must not foul a track until switches connected with the movement are properly lined, or in the case of spring switches the conflicting route is seen to be clear.

When waiting to cross from one track to another and during the approach or passage of

a train or engine on tracks involved, all switches connected with the movement must be secured in the normal position. Switches must not be restored to normal position until a movement is completed or clear of the track involved.

Trainmen of a train occupying the main track at a meeting or passing point will, when practicable, open the switch for the approaching train and protect it until relieved by a trainman of the other train or by a switchtender.

When a train or engine is closely approaching or passing over a switch employees must keep not less than twenty feet from the switch stand, and on single track must, in addition, when practicable, stand on the opposite side of the track.

Unless otherwise provided, the position of switches at junction points is normal when set for the main traffic subdivision, and at ends of double track when set for trains leaving single track for double track.

When a train or engine turns out from the main track at any point, the switch must not be restored to its normal position until the train or engine has cleared the fouling point.

If it is known or suspected that the points, or any parts of a switch are damaged or broken, the switch must be protected, section foreman notified, and report made to the proper authority from the first available point of communication.

Lights need not be maintained on main track switches in single track automatic block signal system territory equipped with the color light type of signal, when the switch is located not more than two hundred feet in advance of the signal protecting the block in which it is located.

104a. Spring switches may be trailed through when set in normal position at a speed not exceeding twenty miles per hour until the leading wheels have passed through, after which normal speed may be resumed.

When a trailing movement is stopped before passing entirely through the switch the movement must not be reversed nor slack taken until the switch has been properly set by hand.

Trains or engines moving in the facing point direction finding the fixed signal protecting a spring switch at stop must examine the points, and if not properly closed and cannot be closed by hand, they must be spiked in proper position before being used. After movement over switch has been made spike must be removed and superintendent notified immediately. If in automatic block signal system territory and switch points are found in proper position train will be governed by indication of signal.

Trains or engines must stop and examine main track spring switches before making facing point movements over them unless receiving a signal indication permitting them to proceed.

Ash pans must not be cleaned, sand used nor water allowed to run over any part of a spring switch.

104b. Where derails are provided on other than the main track they must be known to be in proper position before signals are given for movements on tracks so equipped, and except while such tracks are being used the derails must be kept set in derailing position whether or not there are cars on the tracks. Employees must know where such derails are located.

105. Unless otherwise provided, trains or engines using other than a main track must proceed at yard speed.

Sidings of an assigned direction must not be used in a reverse direction unless authorized by train order or, in an emergency under flag protection.

No car or dead engine shall be left on or obstructing a siding without promptly advising the proper authority.

106. Trains will run under the direction of their conductors. When a train is run without a conductor the engineman will perform the duties of the conductor.

Conductors, enginemen, and pilots, if any, are responsible for the safety of their trains and the observance of the rules and, under conditions not provided for by the rules, must take every precaution for protection. This does not relieve other employees of their responsibility under the rules.

107. Trains or engines must move with extreme care when meeting or passing a train carrying passengers which is receiving or discharging traffic at a station. They must not pass between such train and the platform at which traffic is being received or discharged unless the movement is properly protected.

108. In case of doubt or uncertainty the safe course must be taken.

109. Instructions respecting the movement of trains or the condition of track or bridges must be in writing.

110. When snow removal equipment is being operated, points must be raised, wings closed, and a speed of fifteen miles per hour not exceeded when meeting or passing trains on adjacent tracks or passing structures which are liable to be damaged.

111. When other duties will permit, employees in the vicinity of passing trains must observe the condition of equipment in such trains; trainman at rear of moving trains will be in position, on rear platform where provided, and trainmen of standing trains in best possible position on the ground from which a view of both sides of passing trains can be obtained. If a dangerous condition is apparent every effort must be made to stop the train.

Train and engine crews of moving trains must, when practicable, be on the lookout for signals given by employees calling attention to conditions on their train.

Trainmen at rear of moving trains must frequently look back at the track to see if there is evidence of dragging equipment.

Conductors and trainmen must know that cars in their trains are in good order before starting and inspect them whenever they have an opportunity to do so. All cars taken in their trains en route must be examined with extra care.

When practicable, employees of a moving train must make frequent inspection of their train to ensure it is in order, and when a freight train stops a trainman will be in position to inspect the train as it pulls by.

When starting freight trains speed must be regulated to permit trainmen to entrain.

112. A sufficient number of hand brakes must be applied on cars left at any point to prevent them from moving. If left on a siding they must be coupled to other cars, if any, on such track unless necessary to separate them at public crossings at grade or otherwise.

Before coupling to cars at any point care must be taken to ensure that cars being coupled to are properly secured.

Before coupling to or moving cars being loaded or unloaded all persons in or about such cars must be notified. Vehicles and loading or unloading devices must be clear.

Cars must not be moved foul of other tracks unless the movement is properly protected.

113. When for any reason a siding or crossover is to be used, speed through turnouts must not exceed fifteen miles per hour unless otherwise provided.

114. Before making running switches stop must be made, hand brakes and switch tested. They must not be made with or onto occupied cars or cars containing explosives or other dangerous commodities.

151. (DOUBLE, THREE OR MORE TRACKS) Where two main tracks are in service trains or engines must keep to the right unless otherwise provided.

Where three or more main tracks are in service they shall be designated by numbers and their use indicated by special instructions.

152. (DOUBLE, THREE OR MORE TRACKS) When a train or engine crosses over to or obstructs another track, unless otherwise provided, it must first be protected as prescribed by rule 99 in both directions on that track.

## RULES FOR MOVEMENT BY TRAIN ORDERS

201. For movements not provided for by time table, unless otherwise provided, train orders will be issued by authority and over the signature of the superintendent or designated train dispatchers, and only contain information or instructions essential to such movements.

They must be brief and clear; in the prescribed forms when applicable; and without erasure, alteration or interlineation.

Figures in train orders must not be surrounded by brackets, circles or other marks.

The different forms of train orders may be combined in one, provided that every movement in such combination directly affects the train first named in the order.

202. Each train order must be given in the same words to all employees or trains addressed.

203. Train orders must be numbered consecutively each day beginning at midnight.

204. Train orders must be addressed to those who are to execute or observe them, naming the place at which each is to receive his copy. Those for a train must be regarded as addressed to conductors, enginemen, and also to pilots or snow plow foremen, if any. Those addressed to yardmasters may be used only by crews within yard limits. A copy for each employee addressed must be supplied by the operator.

Train orders addressed to operators restricting the movement of trains must be respected by conductors and enginemen the same as if addressed to them.

205. Each train order must be written in full in a book provided for the purpose in the office of the train dispatcher; and with it recorded the signals and responses transmitted, the offices from which the order is repeated and the time, the names of those who sign for the order, the times at which the order is made complete, and the train dispatcher's initials. These records must be made at once and never from memory or memoranda.

Additions to train orders must not be made after they have been repeated.

206. In train orders, regular trains will be designated by numbers as "No. 10," and sections as "Second 10," adding engine numbers. If the number of the engine cannot be ascertained the word "unknown" will be used. Extra trains will be designated by engine numbers and the direction, as "Extra 234 East." Work extras will be designated as "Work extra 234." Trains operating snow plows will be designated as "No. 86 Eng. 234 snow plow" or "Plow extra 234 East."

Engines of other railways will be designated by their initials and numbers, as ". . . . . ABC 234."

When two or more engines are coupled, and a designation is made by engine number, the number of the leading engine will be used, except that when an assisting engine is used over part of a subdivision the number of the engine taking the train through will be used.

Even hours as "10.00 a.m." must not be used in stating time in train orders.

In transmitting and repeating train orders by telephone the numbers of trains and engines in the address will be pronounced and then spelled letter by letter. All stations and numerals in the body of an order must first be plainly pronounced and then spelled letter by letter, thus: Aurora A-u-r-o-r-a, and one nought five o-n-e n-o-u-g-h-t f-i-v-e.

When train orders are transmitted by telegraph the train dispatcher must write the order into the train order book as the first office repeats, and check and underscore each word and figure at each repetition. When transmitted by telephone he must write the order as he transmits it, and check and underscore each word and figure at each repetition.

207. Before transmitting a train order, the train dispatcher must give the signal 31, 19R or 19Y followed by the direction to each office addressed, the number of copies being stated, if more or less than three, as: "31 west copy 5," or "19R east copy 2," or "19Y west copy 7," and receive the proper response from the operator as prescribed by rule 221.

208. A train order to be sent to two or more offices must be transmitted simultaneously to as many of them as practicable. When not sent simultaneously to all, the order must be sent first to the superior train.

The several addresses must be in the order of superiority of trains, each office taking its proper address. When practicable, the operator at the first restricting point and at all meeting points must be made a party to the order, except where there is an automatic block signal system in operation.

When the signature of the operator only is required it may be given on form 19R.

208a. (SINGLE TRACK) Copies of the order addressed to the operator at the restricting point must be delivered to all trains affected until all have arrived from one direction.

Except at its initial station, or at a station at which the restricted train is required to obtain a terminal clearance, a train order must not be sent for delivery to a train at the point at which its right or schedule is being restricted by the order, if it can be avoided. Except at its initial station, when a restricting order is so sent, the words "This order to.....at....." must be added and is notice to an opposing train to approach that point at yard speed. When form "A" is used the order should provide for the restricted train to hold the main track under conditions where such train would otherwise be required to take the siding.

209. Operators receiving train orders must write or typewrite them on the prescribed form in manifold during transmission. If for any reason a train order is to be rewritten operators must make the new copy on the prescribed form from the original and, except as prescribed by rule 209a, must repeat to the train dispatcher from the new copy each time additional copies are made. The word "complete," the time, and the signature of the operator must be in his handwriting. They must retain the lowest copy of each train order.

The name of the operator who first copied the order will be shown with the initials of the operator who made the additional copies.

209a. Unless otherwise directed, additional copies of the train orders prescribed in rule 210d may be made without repeating to the train dispatcher provided they are traced from the original copy.

210. When a train order is transmitted, each operator receiving the order must, unless otherwise directed, repeat it at once from the manifold copy in the succession in which the several offices have been addressed. Each operator receiving the order must, unless relieved of the duty by the train dispatcher, check the other repeats for correctness. If an operator is so relieved, the train dispatcher must make record in the train order book. An operator must not be relieved of this duty unless one or more operators who have received the order are required to check each repeat.

When an order cannot be transmitted simultaneously to all, or if the repeat from any office is delayed, or is again required, train dispatcher must require an operator at an office from which repeat has already been made to check the correctness of each subsequent repeat. The office checking such repeats must be recorded in the train order book.

The time at which train orders are repeated must be written on the order.

210a. After a 31 train order has been correctly repeated the conductor of the train addressed will read the order aloud to the operator and sign it. The operator will then transmit the signature, preceded by the number of the order, to the train dispatcher who will respond "complete," with the time and his initials. Each operator receiving this response will then write on the order the word "complete," the time and his last name in full. The operator will then deliver a copy for each person addressed to the conductor; the copy for each engineman, pilot and snow plow foreman, if any, will be delivered personally by the conductor who will require the order to be read aloud for comparison and correct understanding, and will obtain their signatures on his copy.

In issuing train orders, form 31 must be used to restrict the right or schedule of trains as follows:

When a restricting order is sent to a train at a point not an open train order office;

When a restricting order is sent to a train which has been cleared or of which the engine has passed the train order signal in proceed indication;

When restricting the movement of a work extra;

When restricting trains in making movements against the current of traffic;

When a train carrying passengers is affected, except where there is an automatic block signal system in operation, or when the operator at the restricted point has been made a party to the order.

210b. After a 19 train order has been correctly repeated the train dispatcher will respond "complete," the time and his initials. Each operator receiving this response will then write on the order the word "complete," the time and his last name in full. Delivery of form 19 train orders must be made by the operator to each person addressed. Delivery of 19R train orders must not be made until the train addressed has been brought to a stop. Where only 19Y train orders are to be delivered to a train, delivery will be made by the operator, or from an approved device where provided for the purpose, without bringing the train to a stop. When delivery of form 19 train orders to enginemen, pilots and snow plow foremen, if any, will take the operator away from the immediate vicinity of his office, these copies will be delivered by the conductor or trainman of the train.

210c. Except as provided in rule 210a, 19R may be used to restrict right or schedule of trains and must be used when speeds of less than ten miles per hour are necessary. 19Y may be used for other purposes which do not restrict right or schedule, except that it may be so used when the operator at the restricted point has been made a party to the order on 19R, or where there is an automatic block signal system in operation.

210d. Train orders issued in the same manner, using a separate series of numbers, will be used in giving instructions regarding track or other conditions.

210e. Conductors and enginemen must require members of their crew to read aloud and know the contents of all train orders as soon as practicable after they have been received. Members of the crew are required, if necessary, to remind conductors and enginemen of their contents.

211. Clearance form A or B must be filled out by the operator before clearing a train, showing thereon, without erasure or alteration, the number of each train order, if any, for that train with other required information, and will then repeat to train dispatcher, from the clearance, the numbers of such orders. The dispatcher will make the required record in the train order book, and if operator has correctly repeated the numbers of the train orders for that train will respond by giving O.K., the time and his initials, which the operator will endorse on the clearance.

When train order signal indicates other than proceed, or at stations where terminal clearance is required, operator must not deliver clearance to a train until it has been O.K'd. by train dispatcher, except in case of failure of communication, which must be noted on the clearance.

If all orders held for a train have been made complete and communication fails before clearance has been O.K.'d by train dispatcher, the operator may deliver such orders, accompanied by clearance bearing notation "Communication has failed," which will be acted upon as though O.K. had been given in the usual manner. When communication is restored, the operator will notify train dispatcher of each train cleared, the time, and the numbers of the orders delivered, which train dispatcher will record in train order book.

If additional train orders are received after train dispatcher has given O.K. to a clearance and before train has been cleared, the clearance must be destroyed and a new one issued, and train dispatcher's O.K. secured to the new clearance.

Clearance should be checked and O.K. given only sufficiently in advance of the departure of trains to avoid delay.

Clearances must be delivered, together with all train orders, to the trains addressed. Train and engine men must see that their train is correctly designated and that train order numbers received agree with those shown on clearance.

Operators will retain a copy of each clearance.

212. When so directed by the train dispatcher, a train order having been transmitted may be acknowledged before repeating by the operator responding "Order Number.....to .....X" with the operator's initials and office signal. The operator must then write in the space provided on the order his initials and the time.

213. "Complete" must not be given to a train order for delivery to an inferior train until the order has been repeated or the "X" response sent by the operator who receives the order for the superior train.

213a. (SINGLE TRACK) Unless there is an automatic block signal system in operation, or when the restricting order has been sent to the superior train at its initial station, or to a station where the superior train is required to obtain a terminal clearance, "complete" must not be given to an order advancing an opposing train against one carrying passengers, or advancing a train carrying passengers against an opposing train, until the signature of the conductor of the train to be restricted, or of the operator as prescribed by rule 208, has been received by the train dispatcher. If such order is sent to the train at the point at which its right or schedule is to be restricted, the signatures of both conductor and operator must first be received by the train dispatcher.

214. When a train order has been repeated or "X" response sent, and before "complete" has been given, the order must be treated as a holding order for the train addressed, but must not be otherwise acted on until "complete" has been given.

If the means of communication fails before an office has repeated an order or has sent the "X" response, the order at that office is of no effect and must be there treated as if it had not been sent.

216. When the train dispatcher issues a train order that is to be delivered to a train by the dispatcher, a carbon impression must be made in the train order book at the time the order is written. If later the order is to be sent to another office it will be transmitted from the copy in the book. The requirements for delivery are the same as at other offices, except that he will not be required to leave the office to deliver orders.

217. A train order to be delivered to a train at a station not an open train order office must be addressed to ".....at (or between)..... care of....." and forwarded and delivered by the conductor or other person in whose care it is addressed and who is responsible for delivery. The person delivering the order will be given copies and a separate clearance for each conductor and each engineman of the train addressed, and when form 31 is used, one extra copy upon which to take their signatures, which he will deliver to the first operator accessible. The operator will at once transmit the

signatures to the train dispatcher and preserve the copy.

Clearance for the train which is to deliver the order will not include order number being sent "In care of," but engineman must be informed and the necessary stops made for delivery.

When necessary to use form 31 it will be made "complete" upon receiving the signature of the person who is to deliver the order, but the order must not be made "complete" to an inferior train until the signatures of the conductor and engineman of the train being restricted by the order have been received by the train dispatcher.

Orders so delivered must be acted upon as if "complete" had been given in the usual manner.

218. When a train is named in a train order by its schedule number, as "No. 10 Eng. 234" (no sections specified), all sections of that schedule are included and each must have copies delivered to it. Particular sections must be specified when it is known the schedule is, or is to be, in sections.

219. An operator must not repeat nor give the "X" response to a train order restricting the movement of a train which has been cleared, or of which the engine has passed his train order signal in proceed indication, until he has obtained the signatures of the conductor and engineman to the order, secured and destroyed all clearances delivered to the train at that station.

After a train has been cleared an order other than a restricting order may be accepted, in which case another clearance will be issued showing the numbers of all train orders delivered to the train at that station, which must be O.K.'d by the train dispatcher.

220. Train orders once in effect continue so until fulfilled, superseded or annulled. Any part of an order specifying a particular movement may be either superseded or annulled.

Orders held by or issued for, or any part of an order relating to, a regular train become void when such train loses both right and schedule as prescribed by rules 4 and 82, or its schedule is annulled.

When a conductor, engineman, or both, is changed off or relieved before the completion of a trip all train orders, clearances and instructions held must be delivered to the relieving conductor or engineman and known to be understood by them. Before proceeding, the engineman must read his train orders aloud to the conductor.

When a train dispatcher is relieved he must make a transfer, written in ink, in the train order book, or other book provided for the purpose, of all train orders in effect. Such orders will be carefully read aloud by the relieving dispatcher and initialled by him in the presence of the train dispatcher being relieved. Each must sign the transfer and know that the orders transferred are understood. Necessary information must also be transferred.

When an operator is relieved he must make a transfer, in a book or on a form provided for the purpose, of all undelivered train orders or other necessary information. Such transfer must be signed by both the employees concerned. Any undelivered or unfulfilled train orders providing for train movements must be annulled by the train dispatcher before an office is closed.

221. Where the display of a signal at a train order office is necessary in order to make delivery of a train order, a train order signal will be used and, unless otherwise provided, will indicate proceed except when a train order is to be delivered to any train in the direction indicated, or as required by rule 91a.

When an operator receives the signal 31 or 19R he must immediately display the stop signal for the direction specified and then respond SDR, adding the direction.

When an operator receives the signal 19Y he must immediately display the caution signal for the direction specified and then respond SDY, adding the direction, except that if the stop signal is already displayed it must be left at that indication and the operator will respond SDR, adding the direction.

When an operator receives the signal 31, 19R or 19Y at an office not equipped with a three indication signal he must immediately display the stop signal for the direction specified and then respond SDR, adding the direction.

At an office not equipped with a train order signal the operator will respond NS instead of SD.

To indicate the delivery of 19Y train orders at an office not equipped with a three indication train order signal when no 31 or 19R train orders are held for any train in the direction indicated, the operator will, on the approach of the train, in addition to the stop signal, display a yellow flag by day or a yellow light by night.

Operators must take extra precautions to ensure delivery of train orders under any unusual conditions, and must have the necessary signalling equipment for this purpose ready for immediate use.

A train must not proceed without a clearance form A or B when the train order signal affecting it is in stop or caution indication while any portion of the train is passing the signal.

222. Except as otherwise provided, operators must promptly record and report to the train dispatcher, from the train register where provided, the time of arrival and departure of all trains and the direction of extra trains.

They must, when practicable, observe trains and report at once to the train dispatcher if the proper signals are not displayed.

223. The following signals and abbreviations may be used:

| | |
|---|---|
| X | Train will be held until train order is made "complete" |
| Com | Complete |
| OK | Correct |
| OS | Train Report |
| No | Number |
| Eng | Engine |
| Psgr | Passenger |
| Frt | Freight |
| Mins | Minutes |
| Jct | Junction |
| Dispr | Dispatcher |
| Opr | Operator |
| Cy | Copy |
| SD | Signal Displayed, adding R or Y as required |
| NS | No Train Order Signal |
| Sub | Subdivision |
| 9 | To clear the line for train orders |
| 23 | A message to all |

Initials for signature of the superintendent or train dispatcher

Office signals indicated in time table

The usual abbreviations for the names of the months.

In transmitting, repeating, copying and recording train orders, spelling of station names must be exactly as shown in the time table.

No other abbreviations are authorized.

# FORMS OF TRAIN ORDERS

NOTE: The words and figures in the following forms are examples indicating the manner in which the orders are to be filled out. Names of stations are represented by letters. Underlinings indicate words and figures which are to be pronounced and spelled in transmitting and repeating by telephone. Orders will be written in the train order book and upon train orders as illustrated in these examples except that underlinings will not appear in train orders.

## Form A—(SINGLE TRACK)

### FIXING MEETING POINTS FOR OPPOSING TRAINS.

(1) *No 2 Eng 402*
*meet No 1 Eng 401*
*at B.*

*Second 4 Eng 404*
*meet No 3 Eng 403*
*at B.*

*No 788 Eng 405*
*meet Extra 701 West*
*at B.*

(2) *No 1 Eng 401*
*meet No 2 Eng 402 at D*
*meet Second 4 Eng 404 at C and*
*meet No 8 Eng 405 at B.*

*Extra 704 East*
*meet Extra 701 West at E and*
*meet No 789 Eng 405*
*at F.*

When the superior train is to take the siding at the meeting point, the words "No.... take siding at....." will be added to the order, as—

(3) *No 4 Eng 456*
*meet No 1 Eng 462 at D*
*No 4 take siding at D.*

Trains receiving these orders will run with respect to each other to the designated points and there meet in the manner prescribed by the rules.

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## Form B—DIRECTING A TRAIN TO PASS OR RUN AHEAD OF ANOTHER TRAIN.

(1) *Extra 594 West*
*pass No 1 Eng 403*
*at J.*
Both trains will run according to rule to the designated point and there arrange for the rear train to pass promptly.

(2) *Extra 702 North*
*pass No 403 Eng 755*
*when overtaken.*
Both trains will run according to rule until the second named train is overtaken and then arrange for the rear train to pass promptly.

(3) *Extra 701 East*
*run ahead of No 6 Eng 755*
*B to M.*
The first named train will run ahead of the second named train between the designated points.

(4) *Extra 704 West*
*run ahead of No 403 Eng 755*
*from F until overtaken.*

The first named train will run ahead of the second named train from the designated point until overtaken and then arrange for the rear train to pass promptly.

This may be modified by adding:

*Unless overtaken at F.*

The first named train will let the second named train pass at the designated point if there overtaken.

When an inferior train receives an order to pass a superior train, authority is conferred to run ahead of the train passed from the designated point.

---

Form C—(SINGLE TRACK) GIVING RIGHT OVER AN OPPOSING TRAIN.

(1) *No 1 Eng 401*
*has right over No 2 Eng 402*
*M to B.*

If the second named train reaches the point last named before the other arrives, it may proceed, keeping clear of the schedule of opposing train as required by rule.

(2) *Extra 701 East*
*has right over No 403 Eng 456*
*A to F.*

The regular train must not go beyond the point last named until the extra train has arrived, unless authorized by train order to do so.

These examples give right to the train first named over the other train between the points named. If the trains meet at either of the designated points, the first named train must take the siding unless the order otherwise prescribes.

---

Form E—TIME ORDERS.

(1) *No 2 Eng 402*
*run thirty 30 mins late*
*A to G and*
*twenty 20 mins late*
*G to Z.*

This makes the schedule time of the train named, between the stations designated only, as much later as stated in the order, and any other train receiving the order is required to run with respect to this later time as before required to run with respect to the regular schedule time. The time in the order should be such as can be easily added to the schedule time.

When it is desired to place a run late order on an extra train created under example 4 of form G, (1) may be used by adding:

*On train order No ten 10*

and the same instructions apply.

(2) *No 2 Eng 405 wait at*
*N until nine nought one 9.01 a.m.*
*P nine fifteen 9.15 a.m.*
*R nine thirty 9.30 a.m.*

The train named must not pass the designated points before the times given. Other trains receiving the order are required to run with respect to the time specified at the designated points, or any intermediate station where schedule time is earlier than the time specified in the order, as before required to run with respect to the schedule time of the train named.

Under these examples each train which is to receive the order must be addressed. They must not be addressed to yardmasters or yard engines unless it is known that the time specified in the order will not be reduced.

(SINGLE TRACK)

(3) *No 2 Eng 402 wait at*
*H until ten fifteen 10.15 a.m.*
*for No 1 Eng 401*
(or *Extra 456 West*).

The train first named must not pass the designated point before the time given unless the second named train has arrived. The second named train is required to run with respect to the time specified at the designated point or any intermediate station where schedule time is earlier than the time specified in the

order, as before required to run with respect to the schedule time of the first named train.

(2) or (3) may be used to place a wait order on an extra train when necessary and the same instructions apply.

---

Form F—FOR SECTIONS.

(1) *Eng 423 display signals*
*and run as First 2*
*A to Z.*

*Engs 423 and 424 display signals*
*and run as First and Second 2*
*A to Z.*

To be used when the number of the engine for which signals are displayed is unknown, and is to be followed by (2), both being single order examples.

(2) *Eng 425 run as Second* (or *Third*) *2*
*A to Z.*

(3) *No 2 Eng 423 display signals*
*B to E*
*for Eng 424.*

*Second 2 Eng 424 display signals*
*B to E*
*for Eng 425.*

(4) *Engs 423 424 and 425*
*run as First Second and Third 2*
*A to Z.*

To add an intermediate section, (5) will be used.

(5) *Eng 424 display signals and run as Second 2 G to Z. Following sections change numbers accordingly.*

The engine named will display signals and run as directed and following sections will take the next higher number.

To drop an intermediate section, (6) will be used.

(6) *Eng 424 is withdrawn as Second 2 at G. Following sections change numbers accordingly.*

The engine named will drop out at the designated point and following sections will take the next lower number.

To substitute one engine for another on a section, (7) will be used.

(7) *Eng 426 instead of Eng 424 display signals and run as Second 2 R to Z.*

The second named engine will drop out at the point first designated and be replaced by the first named engine.

Following sections need not be addressed.

If the second named engine is the last section, the words "display signals and" will be omitted.

To discontinue the display of signals, (8) will be used.

(8) *Second 2 Eng 424*
*take down signals at G.*
The train named will take down signals as directed and a following section must not proceed beyond the designated point.

To pass one section by another, (9) will be used.

(9) *Engs 425 and 424 reverse positions as Second and Third 2*
*H to Z.*
Conductors and enginemen of the trains addressed will exchange train orders and arrange signals accordingly. Following sections, if any, need not be addressed.

Each section affected by these orders must have copies and arrange signals accordingly.

When sections are withdrawn opposing trains affected will, when practicable, be advised.

To annul a section for which signals have been displayed over a subdivision, or any part thereof, when no section is to follow, Form K must be used.

When sections are authorized to an intermediate point of a schedule, except under (3), the train orders must specify which engine or engines shall assume the schedule beyond such point.

When trains are run as sections of a schedule, a section is responsible for preventing the following section passing it without proper authority.

Form G—EXTRA TRAINS.

(1) *Eng 745 run extra*
*A to F.*

(2) *Engs 745 and 746*
*run as two extras*
*A to F.*

(2) may be used, when applicable, to create two (or more) extras but when so used must not be combined with any other form of order.

(3) *Eng 745 run extra*
*A to F and return to A.*

*Eng 745 run extra*
*A to F and return to C.*

The extra must go to F before returning.

(4) *Eng 437 run extra*
*leaving A on Thursday*
*March 26th as follows*
*with right over all trains*
(or *except first class trains*)
(or *all.....ward extra trains*)

| | | | |
|---|---|---|---|
| *Leave* | *A eleven nought one* | *11.01* | *p.m.* |
| | *C eleven fifteen* | *11.15* | *p.m.* |
| | *D eleven thirty* | *11.30* | *p.m.* |
| | *E eleven fifty* | *11.50* | *p.m.* |
| *Arrive* | *F twelve ten* | *12.10* | *a.m.* |

This example may be varied by specifying the character of the extra and the particular trains over which the extra shall or shall not have right.

Trains over which the extra is thus given right must clear the time of the extra as prescribed by the rules.

Where an extra train is authorized to operate at a speed in excess of permissible freight train speed, (4) must be used when any trains may be met or overtaken.

(SINGLE TRACK)

Extra trains should be operated in one direction only, where practicable. When necessary to operate an extra train in the opposite direction, such movement must be protected against opposing extra trains, as—

(5) *Eng 745 run extra*
*A to Z* (or *A to G*)
*with right over westward extra trains.*

Extras over which the train has thus been given right must clear the train as prescribed by rule unless train orders otherwise provide.

When an extra train is to meet an opposing extra train at its initial station the running order should read as follows:

(6) *After Extra 733 West*
*arrives at A*
*Eng 755 run extra*
*A to G* etc.

Under this example Extra 733 must be shown on clearance form as an overdue train and Extra 755 must not leave A until Extra 733 has arrived.

## Form H—(SINGLE TRACK) WORK EXTRAS.

(1) *Eng 733 work extra*
*seven thirty 7.30 a.m.*
*until six thirty 6.30 p.m.*
*between D and E.*

The work extra must, whether standing or moving, protect itself against extra trains within the working limits in both directions as prescribed by the rules. The time of regular trains must be cleared.

This may be modified by adding:

*Not protecting against eastward extra trains.*

The work extra will protect only against westward extra trains. The time of regular trains must be cleared.

*Not protecting against extra trains.*

Protection against extra trains is not required. The time of regular trains must be cleared.

When more than one work extra is to work within the same working limits (2) may be used.

(2) *Eng 733 and Eng 734*
*work as two work extras*
*seven thirty 7.30 a.m.*
*until six thirty 6.30 p.m.*
*between D and E*
*protecting against each other.*

The modifications shown under (1) may be used, and the same instructions apply.

When a work extra has been instructed by train order to not protect against extra trains, and it is desired to have it clear the track for (or protect itself against) designated extra trains, a separate train order must be given, as—

(3) *Work extra 733*
(or *work extra 733*
*and work extra 734*)
*clears* (or *protects against*)
*Extra 760 West*
*between D and E*
*after two ten 2.10 p.m.*

Extra 760 West must not enter the working limits before 2.10 p.m. and will then run expecting to find the work extra (or work extras) clear of the main track (or protecting) as the order may require.

To enable a work extra to work on the time of a regular train (4) will be used.

(4) *Work extra 733*
*protects against No 79 Eng 451*
*and No 76 Eng 453*
*between D and E.*

The work extra may work upon the time of the train or trains named in the order and must protect itself against such train or trains as prescribed by the rules.

The regular train or trains receiving the order will run expecting to find the work extra protecting itself.

When a work extra is to be given exclusive right over all trains (5) will be used.

(5) *Work extra 733*
*has right over all trains*
*between D and E*
*seven thirty 7.30 p.m.*
*until eleven thirty 11.30 p.m.*

This gives the work extra the exclusive right between the points designated between the times named.

The working limits should be as short as practicable, to be changed as the progress of the work may require.

Work extras must give way to all trains as promptly as practicable.

Whenever extra trains are run over working limits they must be given a copy of the order sent to the work extra.

Should the working order instruct a work extra to not protect against extra trains in one or both directions, extra trains must protect against the work extra. If the order indicates that the work extra is protecting itself against other trains, they will run expecting to find the work extra protecting itself.

## (DOUBLE, THREE OR MORE TRACKS)

(6) *Eng 733 work extra*
*on eastward track* (or *both tracks*)
(or *tracks specified by number*)
*seven thirty 7.30 a.m.*
*until six thirty 6.30 p.m.*
*between D and E.*

The work extra must, whether standing or moving, protect itself within the working limits against extra trains moving with the current of traffic on the track or tracks named. The time of regular trains must be cleared.

The same modifications may be used as given in the examples for work extras on single track, and all instructions covering single track work orders apply.

When a work extra is given an order "Not protecting against extra trains" authority is conferred to move in both directions on the track or tracks named. The time of regular trains must be cleared.

When it is desired to move a train against the current of traffic over the working limits provision must be made for the protection of such movement.

Form J—HOLDING ORDER.

(1) *Hold No 2 Eng 402.*

(2) *Hold all* (or *eastward*) *trains.*

When a train has been so held it must not proceed until the order to hold is annulled, or an order given to the operator in the form:

.....*may go.*

These orders will be addressed to the operator and acknowledged in the usual manner, and must be delivered to conductors and enginemen of all trains affected.

This form will be used only when necessary to hold trains until orders can be given, or in case of emergency.

Form K—ANNULLING A SCHEDULE OR A SECTION.

(1) *No 2* (or *Second 6*)
*due to leave A*
*March 26th is annulled*
*A to Z.*

When it is desired to annul a schedule or a section over a portion of a subdivision (2) will be used.

(2) *Second 6 due to leave A*
*March 26th has arrived at E*
*and is annulled E to Z.*

The schedule or section annulled becomes void between the stations named and cannot be restored.

Form K will not be combined with other forms of train order.

## Form L—ANNULLING A TRAIN ORDER.

(1) *Order No ten 10*
(or *ten 10 of March 26th*)
*is annulled.*

If the order to be annulled is of a previous date the annulling order must so state.

(2) *Order No ten 10*
(or *this order*) *is annulled*
*at ten thirty 10.30 a.m.*

(2) may be used when it is desired that an order shall be annulled at a specified time and when so used the order becomes void at the time stated.

If an order which is to be annulled has not been delivered to a train, the annulling order will be addressed to the operator, who will destroy all copies of the order annulled except his own, and write on that "Annulled by Order No....."

An order which has been annulled must not be re-issued or reinstated under its original number.

## Form M—ANNULLING PART OF A TRAIN ORDER.

(1) *That part of*
*Order No ten 10 reading*
*pass No 1 Eng 401 at G*
(or *and meet No 2 Eng 402 at J*)
*is annulled.*

This form will be used only when that part of the order not annulled is clear in its wording.

A part of an order which has been annulled must not be re-issued or reinstated under its original number.

## Form P—SUPERSEDING A TRAIN ORDER OR A PART THEREOF.

This order will be given by adding to prescribed forms the words "instead of....."

(1) *No 1 Eng 401*
*meet No 2 Eng 402*
(or *pass No 3 Eng 403*)
*at C instead of B.*

(2) *No 4 Eng 456*
*meet No 1 Eng 462*
*at C instead of B*
*No 4 take siding at C.*

An order, or part of an order, which has been superseded must not be re-issued or reinstated under its original number, and an

order, or part of an order, superseding a particular movement must not itself be superseded.

A superseding order must not be delivered to a train prior to the delivery of the order which is superseded.

When a train is directed by train order to take siding for another train, such instructions apply only at the point designated in that order, and do not apply to the superseding order unless so specified.

## Form Q—NOTICE OF NEW TIME TABLE OR SUPPLEMENT.

(1) *Time table No eighteen 18*
(or *supplement No one 1*
*to time table No eighteen 18*)
*is effective at*
*twelve nought one 12.01 a.m.*
*Sunday May 2nd.*

Trains or engines must not occupy the main track after the effective time and date specified until copies of the new time table or supplement have been received.

Form R—(DOUBLE, THREE OR MORE TRACKS) PROVIDING FOR A MOVEMENT AGAINST THE CURRENT OF TRAFFIC.

(1) *No 1 Eng 401*
(or *No 1 Eng 401*
*No 3 Eng 402*
*and No 5 Eng 403*)
*has right over opposing trains on eastward* (or *No 2*) *track F to C.*

The designated trains must use the track specified between the points named and have right over opposing trains on that track between those points. Unless otherwise provided, the right conferred extends only to the first crossover switch at the point last named. Opposing trains must not leave the point last named until the designated trains have arrived.

The designated trains must move at yard speed within yard limits.

All trains between the points named moving with the current of traffic in the same direction as the designated trains must, when practicable, receive a copy of the order and may then proceed on their schedules or rights.

The designated trains must be given copies of all train orders affecting them on the track named.

This may be modified as follows:

(2) *After No 4 Eng 404*
*arrives at F*
*No 1 Eng 401*
*has right over opposing trains*
*on eastward* (or *No 2*) *track*
*F to C.*

The train to be moved against the current of traffic must not leave the first named point until the arrival of the first named train.

A train must not be moved against the current of traffic until the track on which it is to run has been cleared of opposing trains.

---

Form U—PROTECTION AGAINST FOLLOWING TRAINS.

(1) *Opr G hold all trains*
*following No 65 Eng 764*
(or *Extra 765 West*)
(*except No 5 Eng 405*)
*until ten thirty 10.30 a.m.*

(2) *Opr G hold all trains*
*following No 65 Eng 764*
(or *Extra 765 West*)
(*except No 5 Eng 406*)
*until No 65 Eng 764*
(or *Extra 765 West*)
*arrives at F.*

These orders will be addressed to the operator at the point first named and to

the train to be protected, and the operator must deliver copies to all trains affected.

They permit the train so protected to occupy the main track without rear flag protection against the trains specified until the time stated in (1) and until the train arrives at the point last named in (2).

On double, three or more tracks protection is afforded only to trains moving with the current of traffic.

Should a train which has been given rear protection pass another train, or a junction, before the order is fulfilled, it must thereafter be governed by rule 99. Under other conditions the situation must be protected by the train dispatcher.

Form U train order must not be used to protect a train within the working limits of a work extra train.

## Form V—SPECIFYING THE SPEED OF A TRAIN.

(1) *Do not exceed*
*ten 10 miles per hour between*
*mileage twelve point one 12.1*
*and mileage twelve point five 12.5*
(or *at mileage twelve point five 12.5*).

To be used when track is reported unsafe for usual speed. It may be varied to cover designated points or conditions as may be required.

(2) *Extra 733 West*
*may run forty 40 miles per hour*
*G to A.*
The train named will not run at the speed specified unless safe to do so.

---

Form W—TRAIN ORDER CHECK OF TRAINS.

(1) *All superior trains*
*(and trains of the same class)*
*due at G*
*before seven fifteen 7.15 a.m. Feb 22nd*
*have arrived (and left) (or except No 9).*

This form will be used when it is desired to give a train the information required by rule 83.

When a superior train is overdue it must be shown on the clearance even though annulled.

To permit a train to leave a station without registering, or obtaining terminal clearance, where such is required, and no other provision is made, (2) will be used.

(2) *Extra 456 West*
*may leave C*
*without registering*
*(or obtaining terminal clearance).*
Where there is a train order signal at such station, the following must be added:
*Provided train order signal indicates proceed.*

## Form X—DECLARING SIGNAL SYSTEMS INOPERATIVE WHEN AUTHORIZED.

(1) *Automatic block signal system between and including signal one eleven 111 at B and signal one seventy six 176 at C inoperative.*

Under (1) interlocking home signals, signals used to protect spring switches or as station protection signals, must not be declared inoperative and must not be so considered.

(2) *Movements by signal indication between signal two twenty one 221 at B and signal two thirty eight 238 at E inoperative. Trains be governed by operating rules and special instructions.*

Under (2) all spring and dual control switches within the limits must be properly secured. Unless so informed, trains or engines must stop and assure themselves that such switches are secured and in proper position before making a facing point movement over them. Home signals protecting railway crossings at grade or drawbridges must not be declared inoperative and must not be so considered.

If the automatic block signal system is to continue in operation (2) may be modified by adding:

*Automatic block signal system rules remain in effect.*

On double, three or more tracks (1) must specify the tracks on which the inoperative system is located.

These orders must be given to all trains and operators affected.

When an automatic block signal system is declared inoperative the signals are withdrawn from service and afford no protection. Until the train order has been annulled all rules which apply to track not protected by an automatic block signal system must be observed.

## Form Y—PROTECTION OF TRACK WORK.

(1) *Men working*
*seven thirty 7.30 a.m.*
*until five thirty 5.30 p.m.*
*at mileage twelve 12*
(or *between mileage twelve 12 and mileage twelve point five 12.5*).
*All trains stop at the red signal and there be governed by instructions of the foreman in charge.*

This form will be used to provide train order protection for track work as prescribed by rule 42. The foreman must be advised of the times specified in the order and arrange signals accordingly.

The working limits should be as short as practicable, to be changed as the progress of the work may require.

## Form Z—SIDING TO BE USED INSTEAD OF MAIN TRACK.

(1) *Main track at H*
*out of service.*
*Trains will move through siding.*

This may be modified when necessary by adding:

*Switches will be secured for siding.*

## Form AA—WHEN ENGINE ON A TRAIN IS CHANGED.

(1) *No 1 has Eng 456*
*instead of Eng 458.*

(2) *Eng 755 instead of Eng 758*
*on Extra West* (or *Psgr Extra West*)
*in train order No ten 10*
(or *Nos ten 10 and twelve 12*).

Other trains affected must be given a copy of the order as soon as practicable.

(Printed on pink paper)

NAME OF RAILWAY

**FORM 19**

Train Order No 10

19

To

At Station

X Initials Opr Time Time

REPEATED AT Time

Made Com Time Time Opr Jones

(Printed on white paper)

NAME OF RAILWAY

**FORM 31**

Train Order No 10

19

To

At Station

X Initials Opr Time Time

REPEATED AT Time

| Conductor | Engineman | Train | Made | Time | Operator |
|---|---|---|---|---|---|
| Smith | Brown | First 2 | Com | Time | Jones |
| | | | | | |
| | | | | | |

(Printed on green paper)

**NAME OF RAILWAY**

**CLEARANCE FORM A**

Station ..... (Hour) ..... 19 .....

Train ..... Second 5 .....

Orders for your train are ..... 5 - 7 - 33 ..... (or Nil) .....

The next train ahead from this station is Extra 785 West It left at Time

and arrived at Station at Time (or not yet)

OK at Time C T S Dispatcher H Smith Operator



When an automatic block signal system is in operation to the next open train order office the information relative to the next train ahead will be omitted.

(Printed on green paper)

**NAME OF RAILWAY**

**TERMINAL CLEARANCE FORM B**

..... Station ..... (Hour) ..... 19 .....

Train Third 490

Orders for your train are { 17 - 25 - 333 / (or Nil) }

All trains which are superior and all trains of the same class due to arrive and leave, have arrived and left except Psgr Extra 432 West - No 4 - No 8 (or Nil)

The next train ahead from this station is Second 490 It left at Time and arrived at Station at Time (or not yet)

OK at Time C T S Dispatcher H Smith Operator

This clearance does not relieve the conductor from personally checking the train register and knowing that all trains which are superior to his train have arrived or left.

When an automatic block signal system is in operation to the next open train order office the information relative to the next train ahead will be omitted.

(Printed on pink paper)

NAME OF RAILWAY

REGISTER TICKET

Station ..... Date ..... 19 .....

Train ..... Conductor .....

Engine ..... Engineman .....

Signals displayed .....
(as per rule 20)

Arrived ..... Left .....

Loads ..... Empties ..... Tons .....

## FIXED SIGNAL DEFINITIONS

APPROACH SIGNAL—A fixed signal used in connection with one or more signals to govern the approach thereto.

AUTOMATIC BLOCK SIGNAL SYSTEM—A series of consecutive blocks governed by block signals, cab signals, or both, actuated by a train or engine, or by certain conditions affecting the use of a block.

BLOCK—A length of track of defined limits, the use of which by trains or engines is governed by block signals, cab signals, or both.

BLOCK SIGNAL—A fixed signal at the entrance of a block to govern trains and engines entering and using that block.

COLOR LIGHT SIGNAL—A fixed signal in which the indications are given by the color of a light only.

DUAL CONTROL SWITCH—A power operated switch equipped for hand operation.

DWARF SIGNAL—A low signal used as a block signal or as a home signal of an interlocking.

ELECTRIC SWITCH LOCK—An electric lock connected with a switch or switch movement to prevent its operation until the lock is released.

GRADE SIGNAL—A stop and proceed signal equipped with a grade signal marker authorizing trains designated by rule to pass at restricted speed without stopping.

HOME SIGNAL—A fixed signal at the entrance of a route or block to govern trains or engines entering and using that route or block.

INTERLOCKING—An arrangement of signals and signal appliances so interconnected that their movements must succeed each other in proper sequence and for which interlocking rules are in effect. It may be operated manually or automatically.

INTERLOCKING LIMITS—The tracks between the opposing home signals of an interlocking.

INTERLOCKING SIGNALS—The fixed signals of an interlocking.

INTERLOCKING STATION — A place from which an interlocking is operated.

IN ADVANCE OF A SIGNAL—The section of a track used by a train or engine after it has passed the signal.

IN THE REAR OF A SIGNAL—The section of a track used by a train or engine before it has passed the signal.

ROUTE—The tracks a train or engine may use in passing from one point to another.

SIGNAL INDICATION—The information conveyed by a fixed signal.

SPEED, RESTRICTED—Proceed prepared to stop short of train, obstruction, or switch not properly lined and to look out for broken rail.

SPEED, SLOW—A speed not exceeding fifteen miles per hour.

SPEED, MEDIUM—A speed not exceeding thirty miles per hour.

SPEED, LIMITED—A speed not exceeding forty-five miles per hour.

SPRING SWITCH—A switch equipped with a spring mechanism arranged to restore the switch points to normal position after having been trailed through.

STATION PROTECTION SIGNAL—A fixed signal used to govern movements of trains or engines approaching the signal and to protect trains or engines occupying the main track, in yards or at stations, in the block in advance of the signal.

SWITCH INDICATOR—A device to indicate the approach of trains in the block or blocks to which it refers. At main track crossovers, the indicators at the switch in each track refer to the blocks on the other track.

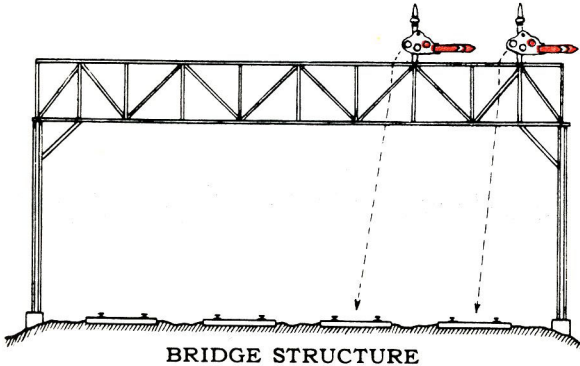
TRAIN ORDER SIGNAL—A fixed signal provided at train order offices used in connection with the delivery of train orders and as prescribed by rule 91a.

## LOCATION OF SIGNALS

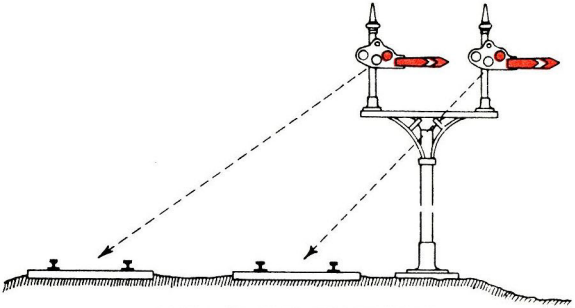
246. Wherever practicable, train order signals will be located adjacent to the train order office to which they apply, and other fixed signals, except switches, will be located over or to the right of the track they govern. Where conditions require other locations they will be indicated in special instructions.

247. When bridge, bracket or cantilever structures are used signals will be located with respect to the tracks on which they affect movements as shown in figures 1, 2 and 3. One or more dummy masts as in figure 3, indicates that there are one or more tracks between the active signal and the track on which it affects movements.

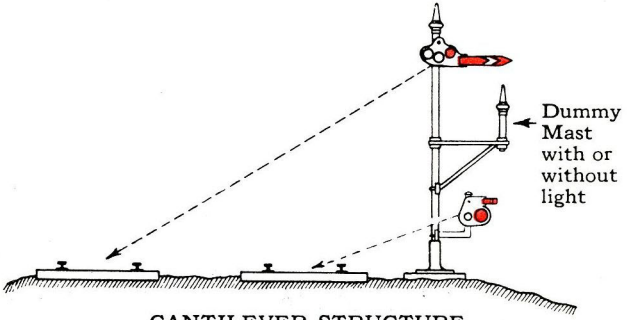
Where color light signals are used, they will be placed in the same position relative to the tracks they govern.



BRIDGE STRUCTURE
*Fig. 1.*



BRACKET STRUCTURE
*Fig. 2.*




CANTILEVER STRUCTURE
*Fig. 3.*

# RULES GOVERNING THE MOVEMENTS OF TRAINS OR ENGINES IN THE SAME DIRECTION BY SIGNAL INDICATION

NOTE: Wherever the words "train dispatcher" or "operator" appear herein they apply to the employee performing the duties.

251. On portions of the railway, and on designated tracks so specified in the time table, or by special instructions, trains or engines will run with reference to other trains in the same direction by fixed signals whose indications will supersede the superiority of trains.

252. The movement of trains will be supervised by the train dispatcher who will issue instructions as may be required.

253. The train dispatcher must be advised in advance of any known condition that will delay the train or prevent it from making usual speed.

255. A train or engine must not enter on nor foul the main track on any portion of a subdivision where the movement is governed by these rules except by fixed signal indication, or until permission is received from the operator or train dispatcher. Permission must not be given by an operator without authority of train dispatcher, except that regular trains may be cleared without such authority when communication with the train dispatcher is interrupted.

256. When signal or permission has been given to a train it may proceed until instructed by signal indication or message to take the siding. Such instruction by message will, when practicable, be given at a preceding station. When instructed by signal indication it may again enter the main track upon receiving the proper signal indication or on instruction from train dispatcher.

When trains are instructed to take the siding they must do so with the least possible delay.

257. Unless otherwise provided, trains displaying signals will continue to display them through the territory.

258. Special instructions as may be necessary to govern this method of operation will be issued and except as affected by these and rules 251-257 inclusive all operating, block signal system and interlocking rules remain in force.

## RULES GOVERNING OPPOSING AND FOLLOWING MOVEMENTS OF TRAINS OR ENGINES BY SIGNAL INDICATION

NOTE: Wherever the words "train dispatcher" or "operator" appear herein they apply to the employee performing the duties.

261. On portions of the railway, and on designated tracks so specified in the time table, or by special instructions, trains or engines will be governed by fixed signals whose indications will supersede superiority of trains for both opposing and following movements on the same track.

262. The movement of trains will be supervised by the train dispatcher who will issue instructions as may be required.

263. The train dispatcher must be advised in advance of any known condition that will delay the train or prevent it from making usual speed. When a home signal indicating other than stop cannot be promptly accepted the train dispatcher must be notified at once.

264. In the event of signal failure or emergency the train dispatcher may, if there is no conflicting movement involved, verbally authorize a train or engine to pass a home signal, but before doing so must provide protection against all opposing movements. The train or engine must run at restricted speed to the next signal. Rule 680 applies at all dual control switches and rule 104a at spring switches.

265. In the event of failure of home signal and all means of communication have failed, trains may pass the signal under protection of flagman but only to enter the siding or clear the main track governed by the signal. Rule 680 applies at all dual control switches and rule 104a at spring switches.

266. When a train or engine is to be given exclusive occupancy of a track permission must be obtained from the train dispatcher specifying the clock time and the working limits. The train dispatcher must block all levers controlling signals governing movements into such limits at stop, and lever blocks must not be removed until the train or engine has cleared the working limits. Within such limits movements may be made in either direction without flag protection. Train or engine must be clear and reported clear of working limits before expiration of time granted and must not re-enter such limits without again obtaining permission from the train dispatcher.

267. Instructions or information received by telephone from the train dispatcher must be repeated to him before being acted on, stating time and occupation of the employee and his train or engine number. The train dispatcher must make proper record immediately.

268. A train or engine must not enter on nor foul a main track, nor re-enter a main track after having cleared it, except by fixed signal indication or until permission has been received from the operator or train dispatcher. Permis-

sion must not be given by the operator without authority of train dispatcher, except that regular trains may be cleared without such authority when communication with the train dispatcher is interrupted.

269. Unless otherwise provided by special instructions, protection of the rear of a train on the main track between the switches of a siding controlled by home signals at both ends is not required. In all other instances, except when given exclusive occupancy of a track, rear protection must be provided in accordance with the rules.

270. Unless otherwise provided, trains displaying signals will continue to display them through the territory.

271. Special instructions as may be necessary to govern this method of operation will be issued and except as affected by these and rules 261-270 inclusive all operating, block signal system and interlocking rules remain in force.

## ELECTRIC STAFF BLOCK SYSTEM RULES

301. On portions of the railway so specified in the time table, or by special instructions, the use of the main track will be governed by the electric staff block system. Possession of a staff supersedes superiority of trains for train movements.

302. The movement of trains will, unless otherwise provided, be supervised by the train dispatcher who will issue instructions as may be required to operators or conductors.

303. Special instructions as may be necessary to govern this method of operation will be issued and except as affected by these and rules 301 and 302 all operating, block signal system and interlocking rules remain in force.

## TRAIN ORDER SIGNAL RULES

NOTE: These diagrams are intended to illustrate the colors only.

401. The following signals will appear where conditions require their use.

401a.

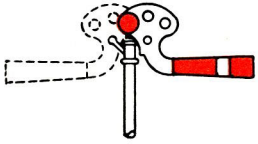


*Fig. 1.*

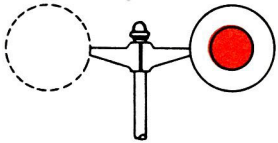


*Fig. 2.*

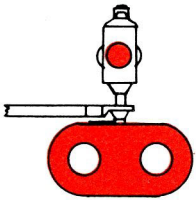


*Fig. 3.*

INDICATION—Stop—for orders.
NAME —Stop Signal.

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401b.

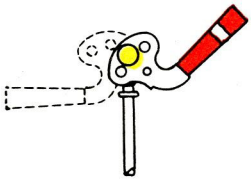

*Fig. 1.*

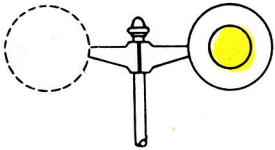

*Fig. 2.*

INDICATION—Caution—for 19Y orders.
NAME —Caution Signal.

401c.

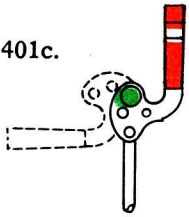

*Fig. 1.*

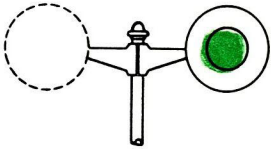

*Fig. 2.*

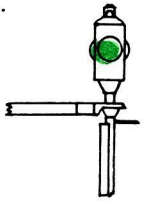

*Fig. 3.*

INDICATION—Proceed—no orders.
NAME —Clear Signal.

402. Train order signals affect all train movements in the direction in which the indications apply, the normal indication being proceed unless otherwise provided.

403. When the stop signal is displayed for trains in the direction in which the signal applies, it will indicate the delivery of restrictive train orders which may affect the train at that station and the train must be governed accordingly.

404. When the caution signal is displayed for trains in the direction in which the signal applies, it will indicate the delivery of 19Y train orders, none of which are restrictive at that point. The speed must be so regulated as to enable proper delivery of the orders to be made to both front and rear of the train.

405. When train orders or clearances are placed in a mechanical device for delivery to a train, additional train orders affecting that train must not be accepted by an operator until the train orders and clearances have been removed from the device and are in possession of the operator.

406. On single track portions of the railway, except in automatic block signal system territory, trains other than those carrying passengers must not pass the proceed indication of train order signals at open train order offices between the hours of 10.00 p.m. and 8.00 a.m. without receiving a hand signal, 12 (c), given by the operator when the engine is approaching and again when rear of train is close. Failing to receive this signal the train must not proceed without obtaining a clearance.

## STATION PROTECTION SIGNAL RULES

451. The following signals will appear where conditions require their use.

Lights may be to either side of signal mast.

451a.

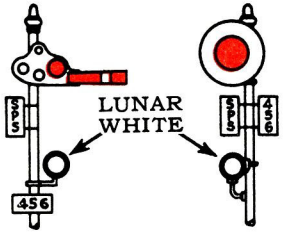


*Fig. 1.* *Fig. 2.*

INDICATION—Stop.

NAME —Stop Signal.

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451b.

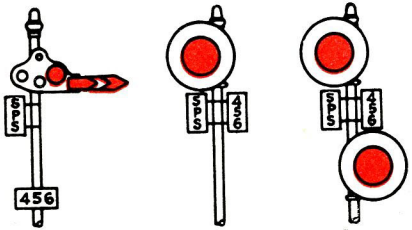



*Fig. 1.* *Fig. 2.* *Fig. 3.*

INDICATION—Stop, then proceed according to rule.

NAME —Stop and Proceed Signal.

451c. A station protection signal will be designated by a marker bearing the letters S P S attached to the signal mast.

451d. Where authorized an automatic block signal may be designated as a station protection signal. Rules 512 and 513 apply. Trains finding a station protection signal displaying an indication other than those shown in rules 451a and 451b will be governed by automatic block signal system rules.

452. A station protection signal affects movements only on the track and in the direction in which it normally applies. It affords protection against all trains but, unless it forms part of a block signal system, protection extends only to the "Block End" sign in the direction indicated.

453. Where a stop signal is used as a station protection signal trains or engines affected by it must stop before reaching the signal and not more than 100 yards from it. If not cleared it must stay until authorized to proceed. Movements protected by stop signal may be made in either direction at yard speed.

454. Where a stop and proceed signal is used as a station protection signal trains or engines affected by it must stop before reaching the signal and not more than 100 yards from it, and may then proceed at yard speed expecting to find the track occupied, switch not properly lined, broken rail or other obstruction, and preceded by a flagman when necessary to ensure complete protection.

# AUTOMATIC BLOCK SIGNAL SYSTEM RULES

501. The following signals will appear where conditions require their use.

Lights may be to either side of signal mast.

501a.

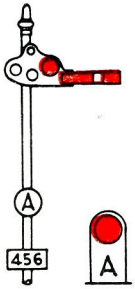



*Fig. 1.* *Fig. 2.*

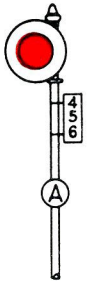



*Fig. 3.*

INDICATION—Stop.

NAME —Stop Signal.

501b.

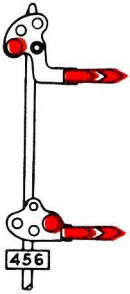



*Fig. 1.*

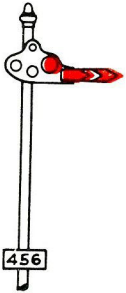



*Fig. 2.*

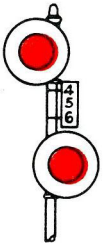



*Fig. 3.*

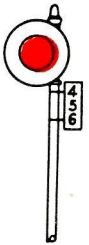



*Fig. 4.*

INDICATION—Stop, then proceed at restricted speed.

NAME —Stop and Proceed Signal.

501d.

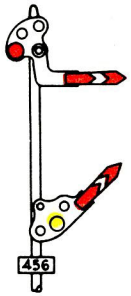



*Fig. 1.* *Fig. 2.* *Fig. 3.*

INDICATION—Proceed, preparing to stop at next signal—Slow speed through turnouts—Medium speed must then not be exceeded until a more favorable indication has been accepted.

NAME —Slow Approach Signal.

501e.

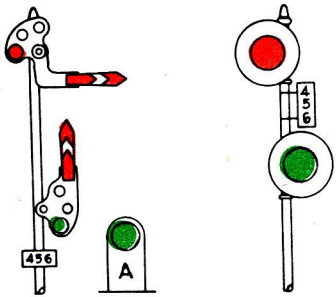



*Fig. 1.* *Fig. 2.* *Fig. 3.*

INDICATION—Proceed, slow speed through turnouts.

NAME —Slow Clear Signal.

501f.

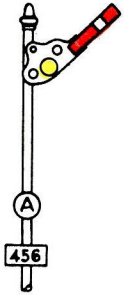



*Fig. 1.*

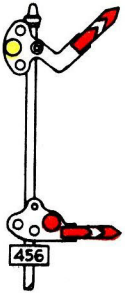



*Fig. 2.*

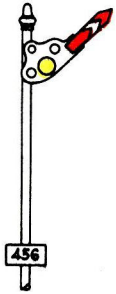



*Fig. 3.*

*Fig. 4.*

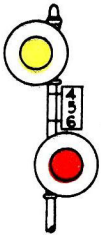



*Fig. 5.*

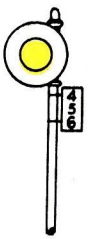



*Fig. 6.*

INDICATION—Proceed, preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. Reduction to medium speed must commence before passing signal.

NAME —Approach Signal.

501g.

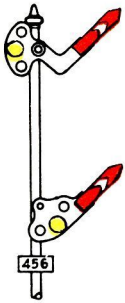



*Fig. 1.*

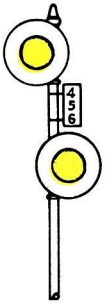



*Fig. 2.*

INDICATION—Proceed, approaching next signal at slow speed. Trains exceeding medium speed must at once reduce to that speed.

NAME —Approach Slow Signal.

501h.

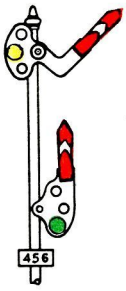



*Fig. 1.*

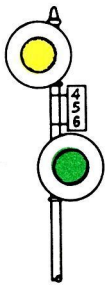



*Fig. 2.*

INDICATION—Proceed, approaching next signal at medium speed.

NAME —Approach Medium Signal.

501j.

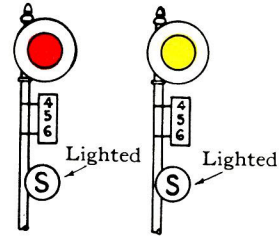



*Fig. 1.* *Fig. 2.*

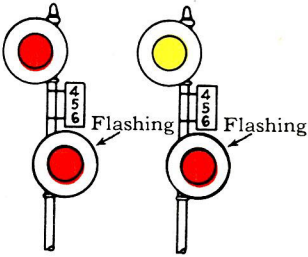



*Fig. 3.* *Fig. 4.*

INDICATION—Observe indication displayed by upper light. Take siding when lower light flashing or "S" lighted.

NAME —Take Siding Signal.

501k.

*Fig. 1.*

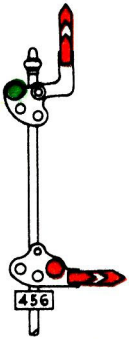



*Fig. 2.*

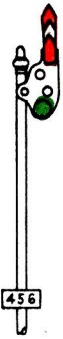



*Fig. 3.*

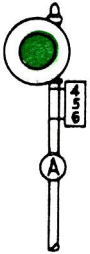



*Fig. 4.*

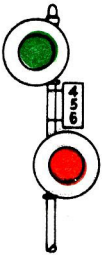



*Fig. 5.*

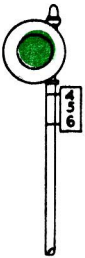



*Fig. 6.*

INDICATION—Proceed.

NAME —Clear Signal.

505. Block signals, cab signals, or both, govern the use of the blocks, but, unless otherwise provided, do not supersede the superiority of trains, nor dispense with the use or observance of other signals whenever and wherever they may be required.

Automatic block signals will be equipped with number markers.

Automatic block signal and cab signal systems will be designated in the time table.

506. When an interlocking is in use in automatic block signal system territory interlocking rules govern movements through the interlocking.

507. An automatic block signal system must not be declared inoperative except by train order, which must not be issued without authority to the train dispatcher from the signal supervisor, who will not give such authority unless the signals between two or more adjoining stations have become inoperative.

508. Unless otherwise provided, on single track, block signals apply to all movements of trains or engines in the direction in which the indications normally apply, and on double, three or more tracks, they apply to movements with the current of traffic on the track to which they normally refer.

509. When a train or engine approaches a stop signal indicating stop it must stop before reaching the signal and not more than 100 yards from it. If not immediately cleared it must communicate with train dispatcher, and upon receiving advice that there is no conflicting train movement may proceed at restricted speed to the next signal. If unable to secure the information that there is no conflicting train movement it may proceed only under protection of flagman to the next signal displaying a less restrictive indication than stop or stop and proceed.

509a. When a train or engine approaches a stop and proceed signal indicating stop it must, except as prescribed by rule 509b, stop before reaching the signal and not more than 100 yards from it and may then proceed at once at restricted speed.

509b. Where authorized a stop and proceed block signal may be designated as a grade signal. A train handling fifty percent or more of ruling grade tonnage approaching a grade signal indicating stop may pass it without stopping and proceed at restricted speed to the next signal. Grade signals will be designated by a yellow marker attached to the mast showing the letter G.

*Fig. 1.*

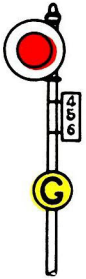



*Fig. 2.*

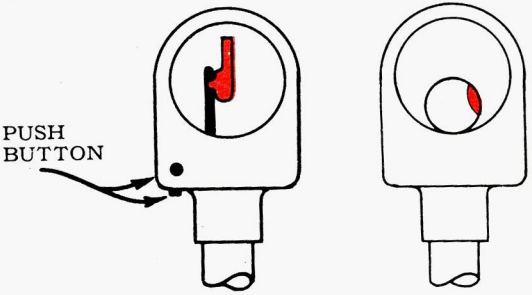
NAME—Grade Signal.

510. Block signals or switch indicators which are evidently out of order must be reported to the train dispatcher from the first available point of communication.

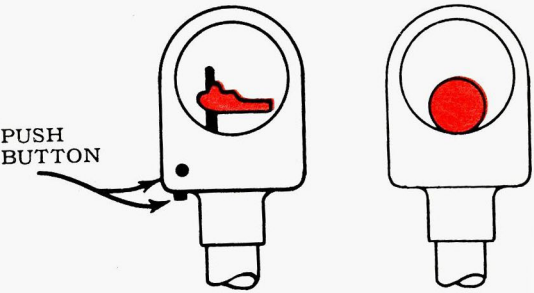
511. Both switches of a crossover must be open before a train or engine starts to make a crossover movement and the movement must be completed before either switch is restored to normal position. When a crossover is to be used the switch in the track on which the train or engine is standing must be opened first.

512. Where switch indicators are provided, the indicator must be observed immediately before a main track switch is opened. When indication shows "train approaching," the switch must not be opened except under flag protection.

The indications displayed by switch indicators do not relieve engine, train or yard crews from protecting their train or engine as required by the rules, unless otherwise provided.




INDICATION—No train approaching.




INDICATION—Train approaching.

513. Where switch indicators are not in service, a train or engine which is to foul or enter a main track from a crossover, siding or other track, must wait three minutes after the main track switch has been opened before moving foul, except at meeting points when the train to be met has cleared the switch and is occupying the block. This will not relieve employees from protecting their train or engine as required by the rules.

513a. Unless otherwise protected entrance to a main track through a spring switch must be made under the provision of rule 513 operating the switch by hand.

514. A train or engine entering a block between signals must be protected as required by the rules and must proceed at restricted speed to the next signal in advance.

When a train or engine has passed a signal permitting it to proceed and is delayed in the block, it must proceed at restricted speed to the next signal.

515. A train or engine having passed beyond the limits of a block must not back into that block except under protection.

519. To avoid holding main track signals at stop cars or engines must not be allowed to stand between the fouling point and a main track switch.

## INTERLOCKING RULES

601. The following signals will appear where conditions require their use.

Lights may be to either side of signal mast.

601a.

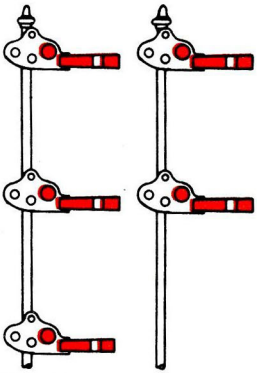


*Fig. 1.* *Fig. 2.* *Fig. 3.*

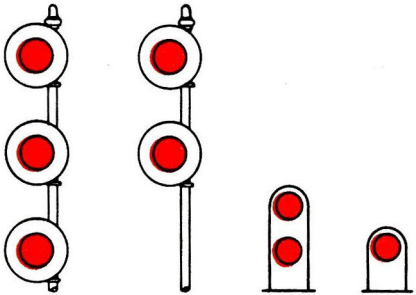


*Fig. 4.* *Fig. 5.* *Fig. 6.* *Fig. 7.*

INDICATION—Stop.

NAME —Stop Signal.

601b.

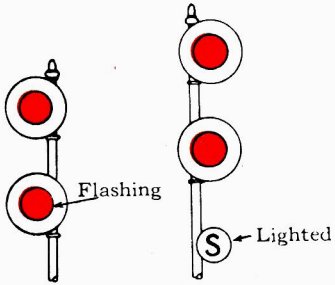



*Fig. 1.* *Fig. 2.*

INDICATION—Stop. Lower light flashing or "S" lighted–Line switch for siding and then be governed by indication displayed.

NAME —Take Siding Signal.

601c.

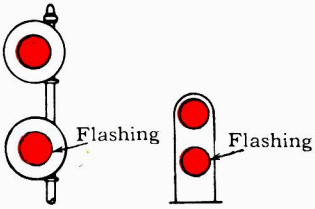



*Fig. 1.* *Fig. 2.*

INDICATION—Stop. Line switch for main track and then be governed by indication displayed.

NAME —Leave Siding Signal.

601d.

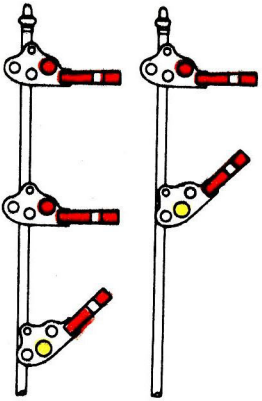


*Fig. 1.* *Fig. 2.* *Fig. 3.*

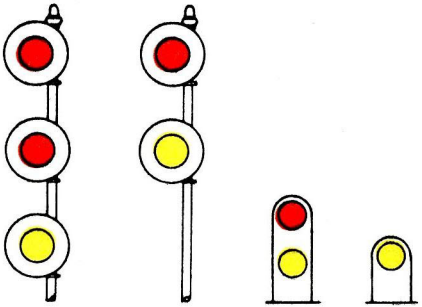


*Fig. 4.* *Fig. 5.* *Fig. 6.* *Fig. 7.*

INDICATION—Proceed at restricted speed.
NAME —Restricting Signal.

601e.

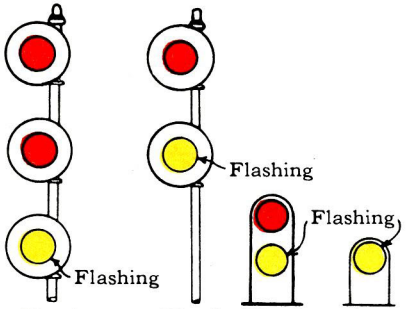



*Fig. 1.* *Fig. 2.* *Fig. 3.* *Fig. 4.*

INDICATION—Proceed, preparing to stop at next signal—Slow speed within interlocking limits—Medium speed must then not be exceeded until a more favorable indication has been accepted.

NAME —Slow Approach Signal.

601f.

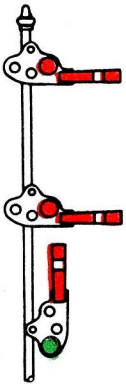


*Fig. 1.*

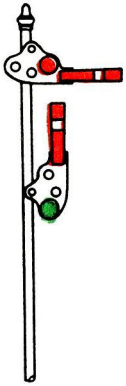


*Fig. 2.*

*Fig. 3.*

*Fig. 4.*

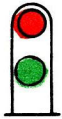


*Fig. 5.*

*Fig. 6.*

INDICATION—Proceed, slow speed within interlocking limits.

NAME —Slow Clear Signal.

601g.

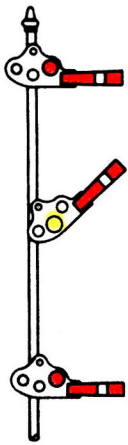


*Fig. 1.*

*Fig. 2.*

INDICATION—Proceed at medium speed preparing to stop at next signal.

NAME —Medium Approach Signal.

601h.

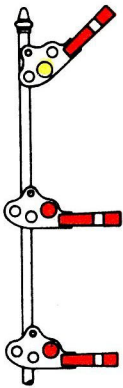


*Fig. 1.*

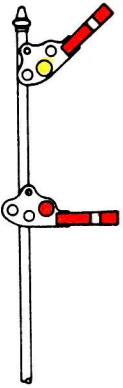


*Fig. 2.*

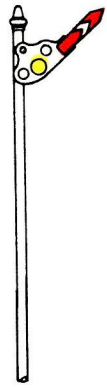


*Fig. 3.*

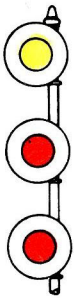


*Fig. 4.*

*Fig. 5.*

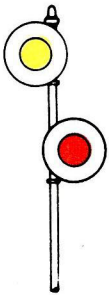


*Fig. 6.*

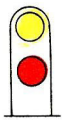


*Fig. 7.*

*Fig. 8.*

INDICATION—Proceed, preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. Reduction to medium speed must commence before passing signal.

NAME —Approach Signal.

601j.

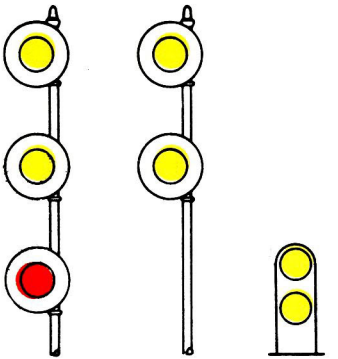


*Fig. 1.* *Fig. 2.* *Fig. 3.*

INDICATION—Proceed, approaching next signal at slow speed. Train exceeding medium speed must at once reduce to that speed.

NAME —Approach Slow Signal.

601k.

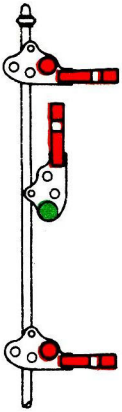


*Fig. 1.*

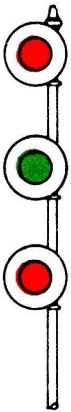


*Fig. 2.*

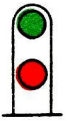


*Fig. 3.*

INDICATION—Proceed, medium speed within interlocking limits.

NAME —Medium Clear Signal.

601m.

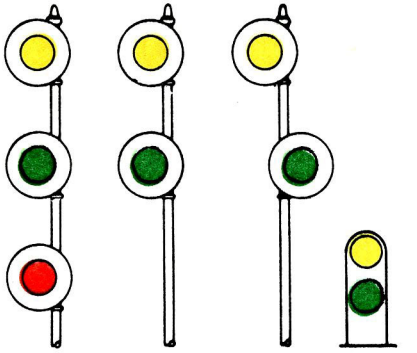


*Fig. 1.* *Fig. 2.* *Fig. 3.* *Fig. 4.*

INDICATION—Proceed, approaching next signal at medium speed.

NAME —Approach Medium Signal.

601n.

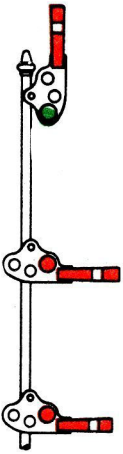


*Fig. 1.*

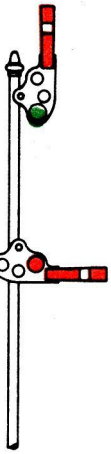


*Fig. 2.*

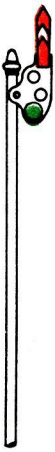


*Fig. 3.*

*Fig. 4.*

*Fig. 5.*

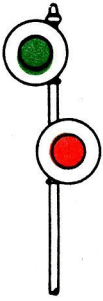


*Fig. 6.*

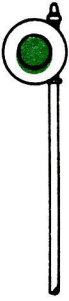


*Fig. 7.*

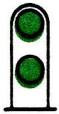


*Fig. 8.*

INDICATION—Proceed.

NAME —Clear Signal.

NOTE: Wherever the word "signalman" appears herein it applies to the employee performing the duties.

605. Interlocking signals govern the use of the routes of an interlocking, and as to movements within interlocking limits, their indications supersede the superiority of trains, but do not dispense with the use or the observance of other signals whenever and wherever they may be required.

607. Dwarf signals or the lower arm or light of other home signals frequently govern more than one route. When such signals indicate that a train or engine may proceed it must be carefully observed which route is set.

608. In automatic block signal system territory when a train or engine accepts restricting signal 601d for a main track movement it must proceed at restricted speed through the block.

611. Unless otherwise provided, signals must be kept in the position displaying the most restrictive indication except when displayed for an immediate movement.

612. Appliances must be operated carefully and only by those charged with that duty. If any irregularity affecting their operation is detected the signals must be displayed to give their most restrictive indication until repairs are made. Any defects must be promptly reported to the superintendent.

613. When the route is set the signals must be operated sufficiently in advance of approaching trains or engines to avoid delay.

614. Signals must not be cleared for any route when cars or engines are standing within the interlocking limits of any conflicting route.

615. When necessary to change any route for which the signals have been cleared for an approaching train or engine, that route must not be changed or signals cleared for any conflicting route until the train or engine for which the signals were first cleared has stopped in rear of its signal.

616. The lever operating a switch, derail, movable frog, detector bar or lock must not be moved when any portion of a train or engine is standing on or closely approaching the switch, derail, or movable frog.

617. Operating levers must be blocked or marked and should not be used when a track, switch or signal is undergoing repairs or when a track is obstructed.

618. During cold weather the levers must be moved as often as may be necessary to keep connections from freezing. The use of salt is forbidden.

619. If the force whose duty it is to keep switches clear when snow or sand is drifting is not on hand when required, the fact must be reported to the superintendent.

621. Signalmen must observe, as far as practicable, whether the indication of the signals corresponds with the position of the levers.

622. Signalmen must not make nor permit any unauthorized repairs, alterations or additions to the interlocking.

623. If there is a derailment, or if a switch, movable point frog or derail is run through, or if any damage occurs to the track or interlocking, the signals must be restored so as to display their most restrictive indication and no movement permitted until all parts of the interlocking and track liable to consequent damage have been examined and are known to be in safe condition.

624. When necessary to disconnect a switch, movable point frog, derail, facing point lock, detector bar or electric locking circuit, all switches, movable point frogs and derails affected must be securely spiked or fastened in the required position, and the levers blocked or marked in such a manner that they cannot be operated before any train or engine is permitted to pass over them.

625. When switches, movable point frogs, derails or signals are undergoing repairs, stop indication must be displayed for any movement which may be affected by such repairs until it has been ascertained from those in charge of the repairs that the switches, movable point frogs and derails are properly lined and secured for such movement.

626. Signalmen must, as far as practicable, observe all passing trains and note whether they are complete and in order. Should there be any indication of conditions endangering the train, or any other train or engine, the signalman must take such measures for the protection of trains as may be practicable.

628. Hand signals must not be used when the proper indication can be displayed by the interlocking signals.

629. If necessary to authorize a train or engine to pass an interlocking signal indicating stop, hand signal or permission may be given by the signalman. Such occurrence must be reported to the superintendent. Yellow flags by day and yellow lights by night will be used by signalmen in giving hand signals.

631. Lights in interlocking stations must be so placed that they cannot be seen from approaching trains.

633. If a train or engine overruns a stop indication the fact must be immediately reported to the superintendent. In case of apparent disregard of signals by trains or engines, signalmen must, if practicable, inspect the signals and see if proper indication was displayed.

634. Signalmen must not permit unauthorized persons to enter the interlocking station.

When a signalman is relieved from duty he must transfer all necessary information.

637. A running switch movement must not be made within interlocking limits.

661. If a signal indication permitting a train or engine to proceed, after being accepted, is changed to a stop indication before the signal is reached, the stop must be made at once. Such occurrence must be reported to the superintendent.

663. Trains or engines must not pass an interlocking signal indicating stop until a member of the train or engine crew is fully informed of the situation. Movement may then be made on hand signal, or permission of the signalman, at restricted speed.

667. Ash pans must not be cleaned, sand used nor water allowed to run within interlocking limits.

669. Trains or engines stopped by signalman in making a movement through an interlocking must not move in either direction until they have received the proper signal from him.

670. A reverse movement within the limits of an interlocking, or a forward movement after making a reverse movement, must not be made without the proper interlocking signal indication or permission from the signalman.

670a. When a train or engine having accepted an indication of an interlocking signal permitting it to proceed stops less than thirty feet in advance of such signal it must not again proceed without permission from the signalman or under the provisions of rule 672.

671. While an interlocking station is closed, should a signal for an open route indicate stop, train and engine crews must know that the route for their train is properly lined and be assured they are protected against movements on conflicting routes, after which train may proceed at restricted speed. The fact must be reported to the superintendent from the first available point of communication.

672. When the home signal of an automatic interlocking indicates stop, and no immediate conflicting movement is evident, a member of the crew must proceed to the crossing and unlock box marked switches. In boxes where lights are provided to indicate the approach of trains, if those of the opposing railway are burning and no train is seen approaching, open the switch and give proceed hand signal to his train. If lights are not provided, or if those of the opposing railway are not lighted, such employee must assure himself that no train is approaching on the opposing railway before opening the switch. After the engine of his train has reached the crossing he will close switch and lock box.

At automatic interlockings where push buttons are provided on home signals to enable a return movement to be made over the crossing while switching, trainman will unlock box and press button. If home signal does not clear he must comply with instructions in preceding paragraph.

Special instructions will be issued as may be necessary.

673. When a train is running against the current of traffic it must approach interlocking limits under such control as to be able to stop at a dwarf signal indicating stop.

674. When an interlocking is temporarily out of service, trains or engines must be brought to a stop before reaching the home signal, and will proceed only upon receiving permission from the signalman or on hand signal from him, given from such a place and in such manner that there can be no misunderstanding on the part of enginemen or trainmen as to the signal, or as to the train or engine for which it is intended.

680. Whenever a train or engine is required to move in the facing point direction over a dual control switch under a stop signal indication, or where the signal has become inoperative, such switch must first be placed on hand-throw, and the engineman so informed. It must be left on hand-throw until movement has cleared the switch.

When interlocked switches are equipped with dual control switch machines signalman may operate or give permission to operate the switch by hand.

To hand operate dual control switch machine, throw selector lever to hand operating position and operate switch by hand-throw lever. If the selector lever is stopped short of the hori-

zontal position, move the hand-throw lever slowly until selector lever is free to complete stroke.

Hand signals may be given and accepted from signalmen or trainmen to pass a home signal indicating stop at a dual control switch only when engineman has been informed that selector lever has been placed in hand operating position.

Signalmen must know that all signal control levers are in normal position before giving permission to hand operate a switch, and must not attempt to operate switch lever until trainman has reported that movements over switch have been completed and that selector lever has been restored to motor or power position.

After movements have been completed, switches must be left in original position with selector lever in motor or power position and locked.

681. Hand-throw switches equipped with electric locks must be operated in accordance with instructions posted at the switch.